

Resources
Conservation
Service



Montana

Basin Outlook Report

February 1, 1996



Basin Outlook Reports and Federal - State - Private Cooperative Snow Surveys

For more water supply and resource management information, contact:

See Attached List

How forecasts are made

Most of the annual streamflow in the Western United States originates as snowfall that has accumulated high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are combined with snowpack data to prepare runoff forecasts. Streamflow forecasts are coordinated by Natural Resources Conservation Service and National Weather Service hydrologists. This report presents a comprehensive picture of water supply conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data, and narratives describing current conditions.

Snowpack data are obtained by using a combination of manual and automated SNOTEL measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation and temperature are monitored on a daily basis and transmitted via meteor burst telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

Forecast uncertainty originates from two sources: (1) uncertainty of future hydrologic and climatic conditions, and (2) error in the forecasting procedure. To express the uncertainty in the most probable forecast, four additional forecasts are provided. The actual streamflow can be expected to exceed the most probable forecast 50% of the time. Similarly, the actual streamflow volume can be expected to exceed the 90% forecast volume 90% of the time. The same is true for the 70%, 30%, and 10% forecasts. Generally, the 90% and 70% forecasts reflect drier than normal hydrologic and climatic conditions; the 30% and 10% forecasts reflect wetter than normal conditions. As the forecast season progresses, a greater portion of the future hydrologic and climatic uncertainty will become known and the additional forecasts will move closer to the most probable forecast.

The United States Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs and marital or familial status. (Not all prohibited bases apply to all programs). Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact the USDA Office of Communications at (202) 720-2791.

To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C., 20250, or call (202) 720-7327 (voice) or (202) 720-1127 (TDD). USDA is an equal employment opportunity employer.



United States Department of Agriculture
Natural Resources Conservation Service (formerly the Soil Conservation Service)
Bozeman, Montana

Where to Get More Information

Beaverhead County

Victor Hager
683-4963

Big Horn County

Dicksie Michael
665-3777

Blaine County

Matthew Crampton
357-2310

Broadwater County

Kelly Morris
266-3146

Carbon County

Gregory Evertz
962-3641

Carter County

Wayne Yost
775-6355

Cascade County

Danny Burgett
727-3603

Chouteau County

Dale Krause
622-5627

Custer County

Roger Goff
232-2439

Daniels County

Stanley French
487-2872

Dawson County

Michael Carlson
365-5565

Deer Lodge County

Glen Green
846-1703

Fallon County

Rick Caquelin
778-2217

Fergus County

Theodore Hawn
538-7401

Flathead County

Mary Pochelon
752-4242

Gallatin County

Gordon Hill
587-6929

Garfield County

Clarence Clayton
557-2232

Glacier County

Bonnie Thies
873-4292

Golden Valley County

John Rouane Jr.
323-2103

Granite County

Matthew Crampton
859-3291

Hill County

Karen Hoffman
265-6252

Jefferson County

Ron Hoagland
287-3215

Judith Basin County

Larry Zarecor
566-2311

Lake County

David Wolf
883-5875

Lewis and Clark County

Nancy Basting
449-5278

Liberty County

Eileen Eide
759-5778

Lincoln County

Angel Rosario
296-2233

Madison County

Mike Barron
842-5741

McCone County

Rusty Irions
485-2660

Meagher County

Otto Ohlson
547-3633

Mineral County

John Blaine
251-4826

Missoula County

John Blaine
251-4826

Musselshell County

John Rouane Jr.
323-2103

Park County

Geri Sullivan
222-2899

Petroleum County

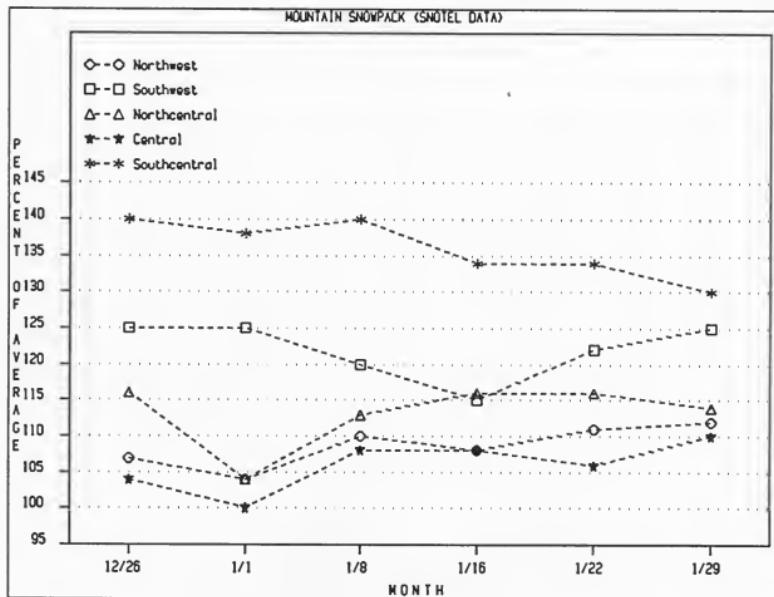
Theodore Hawn
538-7401

Phillips County

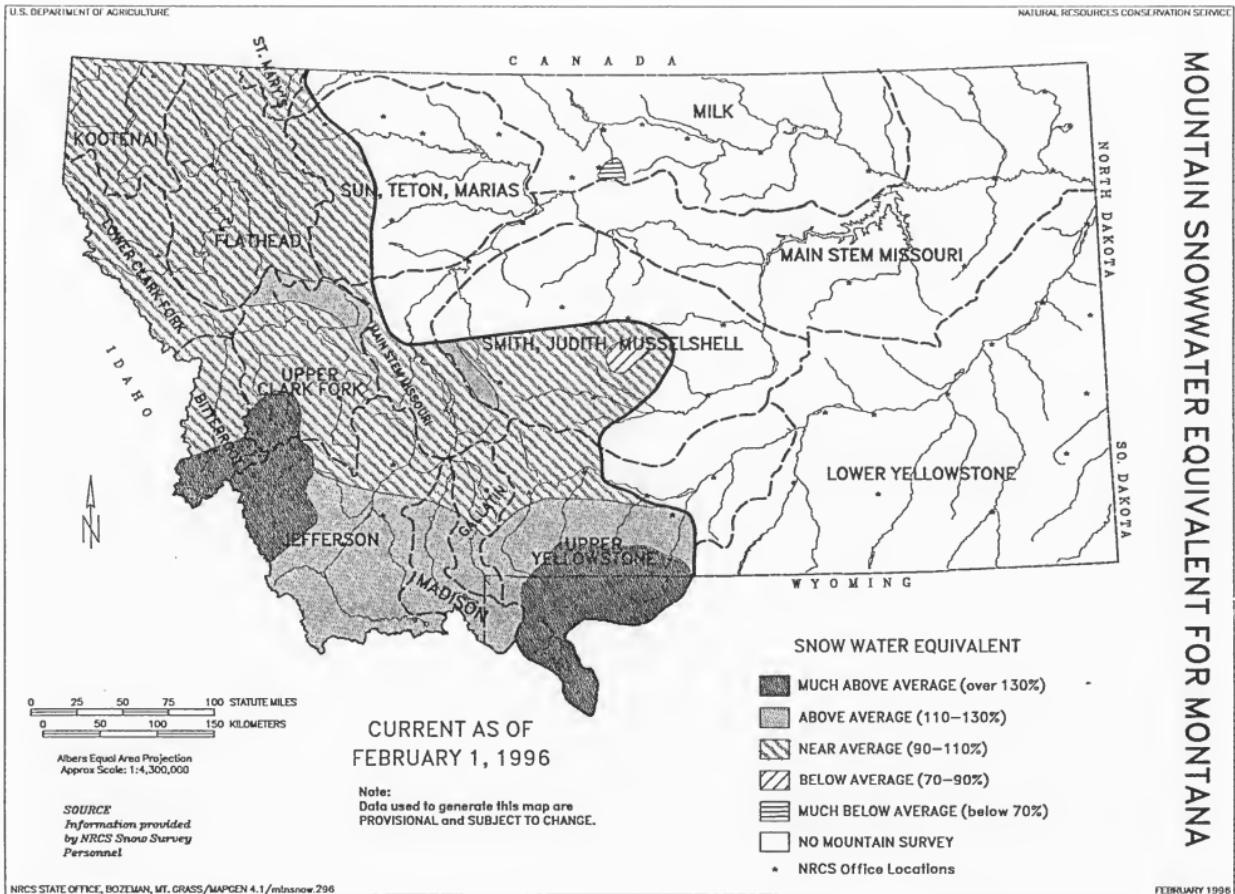
Patty Creamer
654-1334

(over)

Pondera County Phyllis Philipp 278-3922	Rosebud County Stewart Greer 342-5466	Toole County David Pratt 434-5835
Powder River County Carol Hilliard 436-2417	Sanders County Stuart Lomax 826-3701	Treasure County Stewart Greer 342-5466
Powell County Glen Green 846-1703	Sheridan County Monica Friedrich 765-1801	Valley County Lanny Walker 228-4324
Prairie County Mark Parman 637-5381	Silver Bow County Ron Hoagland 287-3215	Wheatland County John Oiestad 632-5534
Ravalli County Keith Robertson 363-5010	Stillwater County Philip Sandoval 322-5359	Wibaux County Rick Caquelin 778-2217
Richland County Kim Whipple 482-2110	Sweet Grass County Dan Glasgow 932-5160	Yellowstone County Harold Cottet Jr. 657-6527
Roosevelt County Richard Iversen 787-5232	Teton County Kaycee Ferster 466-5722	

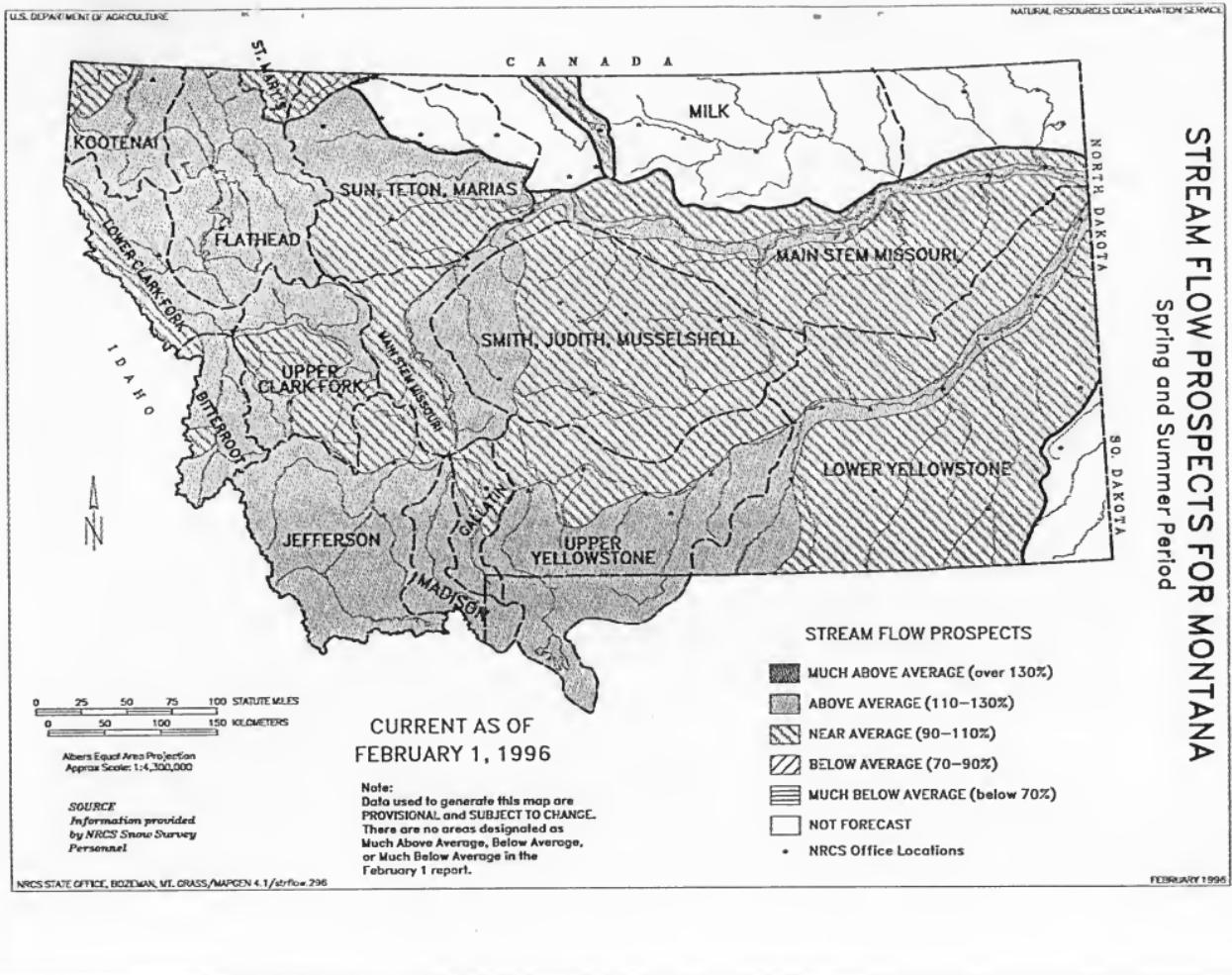


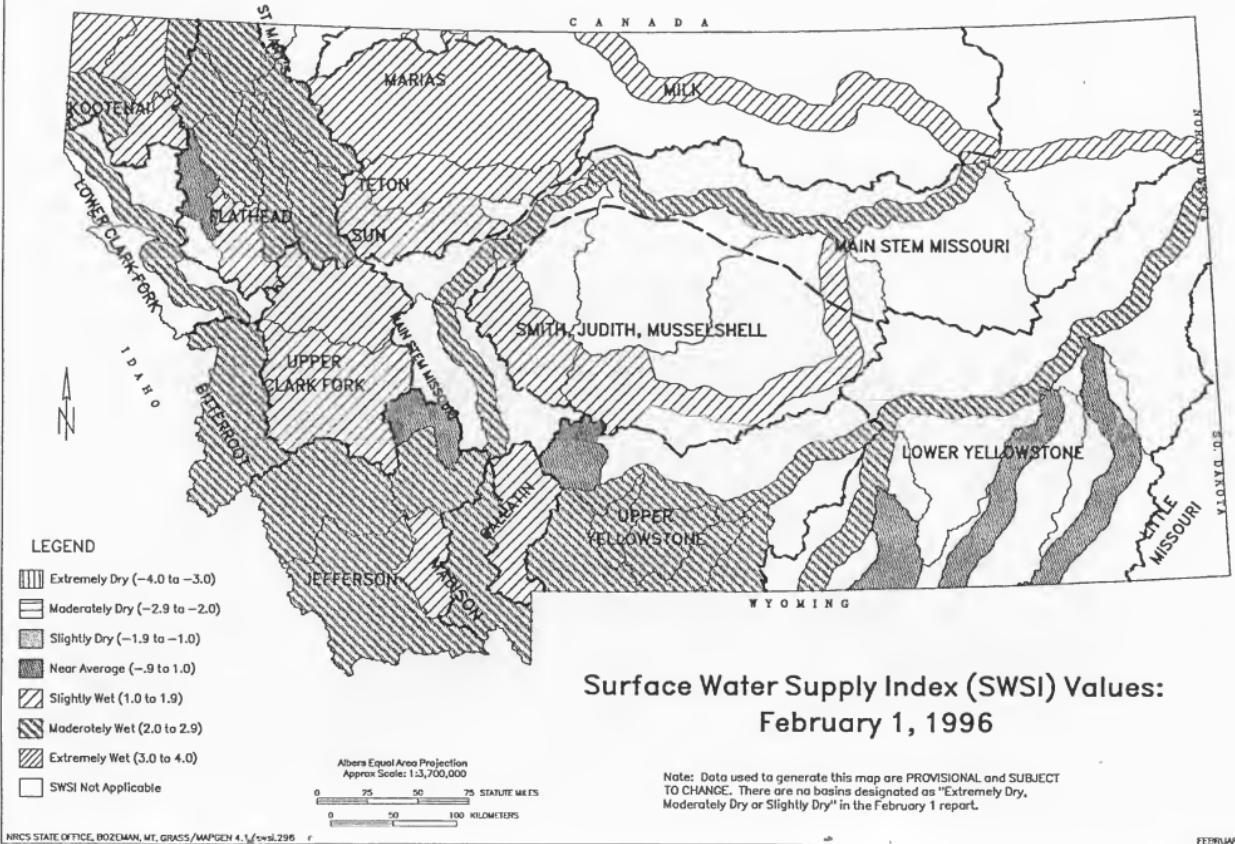
mountain snowwater equivalent for montana



STREAM FLOW PROSPECTS FOR MONTANA

Spring and Summer Period





MONTANA Water Supply Outlook Report as of February 1, 1996

Storms during January have been tracking mainly along the Continental Divide and in the northcentral and northeastern regions of the state. Temperatures during the month have been cold and ended the month well below average. During the last week in January, several new record low temperatures were set and many others were close to setting new record lows.

SNOWPACK

As of February 1, mountain snow water content across western Montana was 13 percent above average and 12 percent above last year. Elevation differences are similar to last month with high elevation snowpack above to well above average and low to mid elevation snowpack average to below average.

With about 40 percent of the normal snow accumulation period remaining, most areas are in real good shape. Snowpack in southcentral Montana is well above average, the Missouri Headwaters, Upper Clark Fork and Bitterroot are above average, and most of the remaining mountain areas are near average.

West of the Continental Divide, snowpacks were 10 percent above average and 14 percent above last year. East of the Continental Divide snowpacks were 20 percent above average and 13 percent above last year.

RIVER BASIN	% OF AVERAGE	% OF LAST YEAR
COLUMBIA	110	114
KOOTENAI	106	99
FLATHEAD	115	115
UPPER CLARK FORK	116	130
BITTERROOT	121	135
LOWER CLARK FORK	98	112
MISSOURI	109	100
MISSOURI HEADWATERS	115	96
JEFFERSON	119	104
MADISON	120	90
GALLATIN	112	103
MISSOURI MAINSTEM	98	113
HEADWATERS MAINSTEM	103	105
SMITH-JUDITH-MUSSELSHELL	100	110
SUN-TETON-MARIAS	106	120
MILK	40	110
ST. MARY	113	121
YELLOWSTONE	128	125
UPPER YELLOWSTONE	135	129
LOWER YELLOWSTONE (WYOMING)	127	125
WIND	134	140
SHOSHONE	160	139
BIGHORN	129	125
TONGUE	113	115
POWDER	103	88

PRECIPITATION

January precipitation across the state was 22 percent above average and 58 percent above last year, while the water year precipitation was 41 percent above average and 28 percent above last year.

West of the Continental Divide, January precipitation was 22 percent above average 64 percent above last year and water year precipitation was 48 percent above average and 39 percent above last year. East of the Divide, January precipitation was 21 percent above average and 55 percent above last year and water year precipitation was 39 percent above average and 24 percent above last year.

RIVER BASIN	JANUARY % OF AVERAGE	WATER YEAR % OF AVERAGE
COLUMBIA	122	148
KOOTENAI	124	153
FLATHEAD	125	148
UPPER CLARK FORK	121	139
BITTERROOT	119	157
LOWER CLARK FORK	120	150
MISSOURI	118	128
JEFFERSON	120	127
MADISON	119	123
GALLATIN	122	114
MISSOURI MAINSTEM	118	114
SMITH-JUDITH-MUSSELSHELL	125	115
SUN-TETON-MARIAS	102	132
MILK	155	163
ST. MARY	114	157
YELLOWSTONE	132	132
UPPER YELLOWSTONE	131	139
LOWER YELLOWSTONE	136	128
WIND	137	129
SHOSHONE	147	164
BIGHORN	114	105
TONGUE	140	120
POWDER	149	110

RESERVOIRS

Major reservoir storage statewide was 21 percent above average and 60 percent above last year.

Reservoir storage west of the Continental Divide was 6 percent below average and 22 percent above last year. East of the Divide, reservoir storage was 3 percent below average and 10 percent below last year.

RIVER BASIN	% OF AVERAGE	% OF LAST YEAR
COLUMBIA	125	130
KOOTENAI	123	101
FLATHEAD	127	169
UPPER CLARK FORK	124	120
BITTERROOT	150	161
LOWER CLARK FORK	103	99

RESERVOIRS (continued)

RIVER BASIN	% OF AVERAGE	% OF LAST YEAR
MISSOURI	120	130
JEFFERSON	114	155
MADISON	101	96
GALLATIN	NO REPORT	
MISSOURI MAINSTEM	103	108
SMITH-JUDITH-MUSSELSHELL	142	142
SUN-TETON-MARIAS	139	127
MILK	125	130
ST. MARY	127	196
YELLOWSTONE	98	98
UPPER YELLOWSTONE	95	88
LOWER YELLOWSTONE	101	107

STREAMFLOW

Streamflow forecasts across Montana were 16 percent above average and 26 percent above last years forecasts.

West of the Continental Divide, streamflows were forecast to be 19 percent above average and 24 percent above last years forecasts. East of the Divide, streamflows were forecast to be 15 percent above average and 20 percent above last years forecasts.

RIVER BASIN	FORECASTS % OF AVERAGE	FORECASTS % OF LAST YEAR
COLUMBIA	119	142
KOOTENAI	119	130
FLATHEAD	118	130
UPPER CLARK FORK	112	144
BITTERROOT	127	161
LOWER CLARK FORK	118	145
MISSOURI	114	109
JEFFERSON	118	113
MADISON	113	91
GALLATIN	108	104
MAINSTEM MISSOURI	117	110
SMITH-JUDITH-MUSSELSHELL	111	127
SUN-TETON-MARIAS	111	131
MILK	101	160
ST. MARY	108	129
YELLOWSTONE	124	123
UPPER YELLOWSTONE	121	118
LOWER YELLOWSTONE	125	126

NOTE: The FORECAST AS % OF LAST YEAR column above, is this years forecast as a percent of last years forecast, not of what actually occurred.

SURFACE WATER SUPPLY INDEX

The Surface Water Supply Index (SWSI) is a measure of surface water availability for the spring and summer months. Water users that rely on mountain precipitation can use the index to evaluate seasonal surface water supplies. The SWSI accounts for mountain snowpack, mountain precipitation, streamflow, reservoir storage, and soil moisture.

SURFACE WATER SUPPLY INDEX (continued)

SWSI RATING SURFACE WATER CONDITION

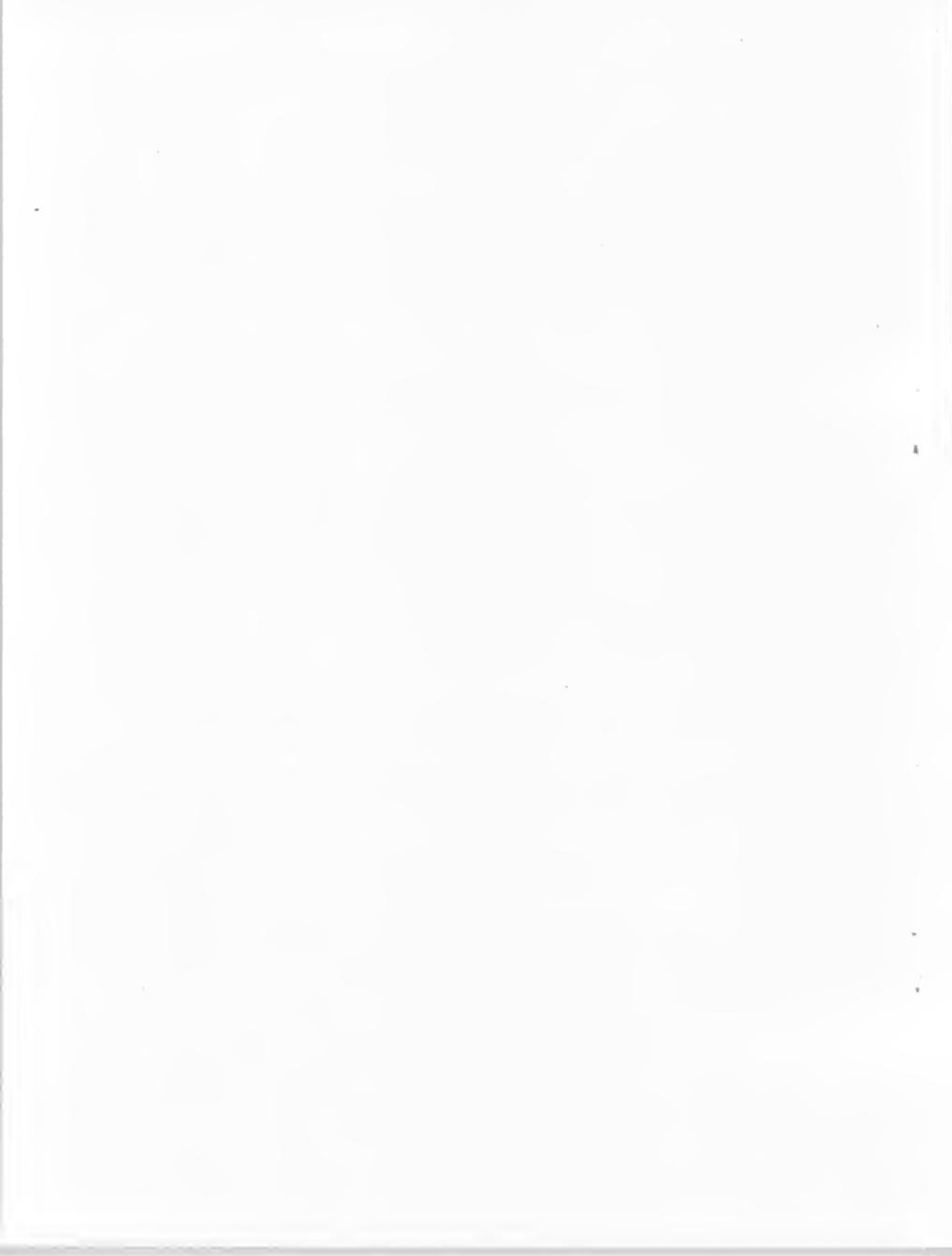
+3.0 to +4.0	Extremely Wet
+2.0 to +3.0	Moderately Wet
+1.0 to +2.0	Slightly Wet
-1.0 to +1.0	Near Average
-1.0 to -2.0	Slightly Dry
-2.0 to -3.0	Moderately Dry
-3.0 to -4.0	Extremely Dry

SWSI's on February 1, were ranging from -1.9 to +3.1 statewide. West of the divide, SWSI's were ranging from -1.4 to +0.6 and east of the divide from -2.3 to +3.1

SWSI	Basin
+2.4	Kootenai River at Ft. Steele (Kootenai in Canada)
+2.4	Tobacco River
+1.8	Kootenai Ft. Steele to Libby Dam
+2.3	Kootenai River below Libby Dam
+1.9	Fisher River
+1.2	Yaak River
+2.3	North Fork Flathead River
+2.0	Middle FORK Flathead River
+2.2	South Fork Flathead River
+2.3	Flathead River at Columbia Falls
+2.7	Stillwater/Whitefish Rivers
+2.0	Swan River
+2.5	Flathead River at Polson
+1.7	Mission Valley
+0.7	Little Bitterroot River
+1.9	Clark Fork River above Rock Creek
+1.9	Blackfoot River
+1.9	Clark Fork River above Missoula
+2.8	Bitterroot River
+2.6	Clark Fork River below Bitterroot River
+2.5	Clark Fork River below Flathead River
+2.1	Beaverhead River
+1.1	Ruby River
+2.7	Big Hole River
+0.8	Boulder River (Jefferson)
+2.2	Jefferson River
+2.2	Madison River
+1.8	Gallatin River
+2.4	Missouri River above Canyon Ferry
+2.2	Missouri River below Canyon Ferry
+1.7	Smith River
+1.9	Sun River
+1.9	Teton River
+2.4	Birch/Dupuyer Creeks
+1.9	Marias River
+1.3	Musselshell River
+2.5	Missouri River above Ft. Peck
+1.6	Missouri River below Ft. Peck
+1.6	Milk River
+2.9	Yellowstone River above Livingston
+0.8	Shields River
+2.3	Boulder River (Yellowstone)

SURFACE WATER SUPPLY INDEX (continued)

SWSI	Basin
+2.2	Stillwater River
+2.1	Rock/Red Lodge Creeks
+2.6	Clarks Fork River
+2.6	Yellowstone River above Bighorn River
+2.2	Bighorn River below Bighorn Lake
0.0	Little Bighorn River
+2.4	Yellowstone River below Bighorn River
+0.6	Tongue River
+0.6	Powder River



KOOTENAI RIVER BASIN in Montana as of February 1, 1996

Snowpack conditions in the Kootenai River Basin in Montana and Canada were above average. Snow water content for the Kootenai in Montana was 6 percent above average and 1 percent below last year. Snow water content for the Kootenai in Canada was 28 percent above average and 35 percent above last year.

Mountain precipitation during January was 23 percent above average and 52 percent above last year. Water year precipitation for the basin, beginning October 1, 1995, was 98 percent above average and 70 percent above last year.

Lake Koocanusa storage on the last day of January was 23 percent above average and 1 percent above last year.

Streamflows, for the period April through July, are forecast to be 8 percent below average and 20 percent above last years forecasts.

Surface Water Supply Indexes (SWSI's) were +2.4 in the Kootenai at Ft. Steele (Kootenai in Canada); 2.4 in the Tobacco River; 1.8 in the Kootenai Ft. Steele to Libby Dam; 2.3 in the Kootenai River below Libby Dam; 1.9 in the Fisher River; and 1.2 in the Yaak River.

Streamflow Forecasts

Forecast Pt Forecast Period	<-- Drier -- Future Conditions --- Wetter -->					30 Yr Avg (1000AF)
	90% (1000AF)	70% (1000AF)	Chance of Exceeding * 50% (Most Prob) (1000AF)	30% (1000AF)	10% (1000AF)	
TOBACCO RIVER nr Eureka						
APR-JUL	134	149	160	120	171	186
APR-SEP	145	163	175	119	187	205
LIBBY RES Inflow (1,2)						
APR-JUL	5685	6582	6990	121	7398	8295
APR-SEP	6659	7712	8190	121	8668	9721
FISHER RIVER near Libby						
APR-JUL	209	233	250	107	267	291
APR-SEP	223	248	265	106	282	307
YAAK RIVER near Troy						
APR-JUL	403	446	475	98	504	547
APR-SEP	427	470	500	99	530	573
						483
						505

Streamflow Forecasts (continued)

Forecast Pt Forecast Period	<-- Drier -->		Future Conditions		-- Wetter -->		30 Yr Avg (1000AF)	
			Chance of Exceeding *					
	90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	% AVG.) (1000AF)	30% (1000AF)	10% (1000AF)		
KOOTENAI at Leonia (1,2)								
APR-JUL	6951	8085	8600	119	9115	10249	7199	
APR-SEP	7993	9297	9890	120	10483	11787	8275	

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

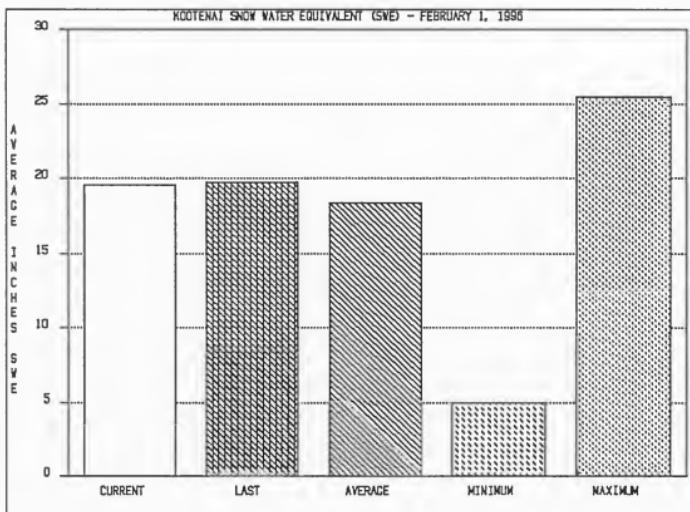
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

Reservoir Storage (1000AF) End of January

Reservoir	Usable Capacity	***** Usable Storage This Year	Last Year	Average
LAKE KOOCANUSA	5748.0	2922.0	2881.0	2381.0

Watershed Snowpack Analysis

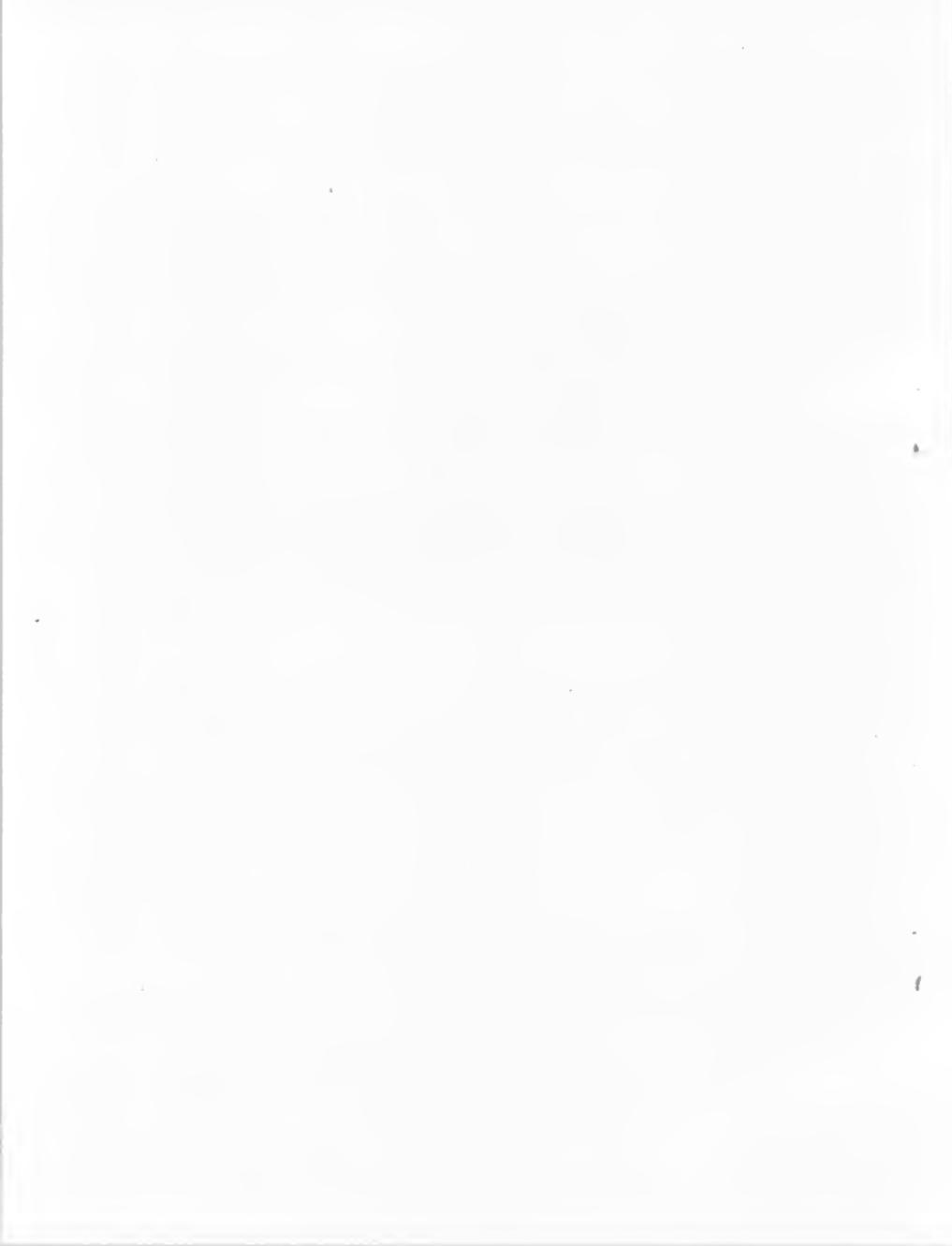
Watershed	Number of Data Sites	This Year	as Percent of Last Year	Average
KOOTENAI MAINSTEM	2	77		88
TOBACCO	3	120		129
FISHER	1	106		99
YAAK	4	98		102
KOOTENAI ab BONNERS FERRY	27	117		118
KOOTENAI in MONTANA	10	99		106



AVERAGE IS FOR THE PERIOD 1961-1990.

MINIMUM SNOW WATER EQUIVALENT, 1969-1995, OCCURRED IN WATER YEAR 1977.

MAXIMUM SNOW WATER EQUIVALENT, 1969-1995, OCCURRED IN WATER YEAR 1972.



FLATHEAD RIVER BASIN as of February 1, 1996

Snowpack conditions in the Flathead River Basin of Montana and Canada were above average. Snow water content in the North Fork Flathead in Canada was 17 percent above average and 18 percent above last year. Snow water content in the Flathead in Montana was 15 percent above average and 15 percent above last year.

Mountain precipitation during January was 25 percent above average and 70 percent above last year. Valley precipitation during January was 25 percent above average and 81 percent above last year. Water year precipitation for the basin, beginning October 1, 1995, was 48 percent above average and 35 percent above last year.

Reservoir storage on the last day of January was 27 percent above average and 69 percent above last year. Combined Camas reservoir storage was 5 percent below average and 93 percent above last year; combined Mission Valley reservoir storage was 14 percent above average and 56 percent above last year; Hungry Horse storage was 19 percent above average and 72 percent above last year; and Flathead Lake storage was 44 percent above average and 63 percent above last year.

Streamflows, for the period April through July, are forecast to be 18 percent above average and 30 percent above last years forecasts.

Surface Water Supply Indexes (SWSI's) were 2.3 in the North Fork Flathead River; 2.0 in the Middle Fork Flathead River; 2.2 in the South Fork Flathead River; 2.3 in the Flathead River at Columbia Falls; 2.7 in the Stillwater/Whitefish Rivers; 2.0 in the Swan River; 2.5 in the Flathead River at Polson; 1.7 in the Mission Valley; and 0.7 in the Little Bitterroot River.

Streamflow Forecasts

Forecast Pt Forecast Period	<-- Drier -- Future Conditions --- Wetter -->						30 Yr Avg (1000AF)	
	Chance of Exceeding *		(1000AF)	(% AVG.)	(1000AF)	(1000AF)		
	90%	70%						
NF FLATHEAD nr Columbia Falls								
APR-JUL	1824	1941	2020	122	2099	2216	1662	
APR-SEP	2020	2145	2230	121	2315	2440	1836	
MF FLATHEAD nr West Glacier								
APR-JUL	1715	1861	1960	120	2059	2205	1638	
APR-SEP	1877	2034	2140	120	2246	2403	1788	
HUNGRY HORSE Reservoir Inflow (1,2)								
APR-JUL	2074	2340	2460	120	2580	2846	2051	
APR-SEP	2212	2493	2620	120	2747	3028	2184	
FLATHEAD at Columbia Falls (2)								
APR-JUL	5629	6094	6410	117	6726	7191	5482	
APR-SEP	6137	6639	6980	117	7321	7823	5960	

Streamflow Forecasts (continued)

Forecast Pt Forecast Period	<--- Drier --- Future Conditions --- Wetter --->						30 Yr Avg (1000AF)	
	Chance of Exceeding *							
	90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	30% (% AVG.) (1000AF)	10% (1000AF)			
STILLWATER nr Whitefish								
APR-JUL	196	222	240	127	258	284	189	
APR-SEP	217	245	265	127	285	313	209	
WHITEFISH nr Kalispell								
APR-JUL	105	117	125	120	133	145	104	
APR-SEP	117	131	140	121	149	163	116	
SWAN RIVER near Bigfork								
APR-JUL	515	574	615	105	656	715	583	
APR-SEP	563	633	680	102	727	797	665	
FLATHEAD Lake Inflow (1,2)								
APR-JUL	6351	7196	7580	119	7964	8809	6390	
APR-SEP	6876	7793	8210	119	8627	9544	6926	

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

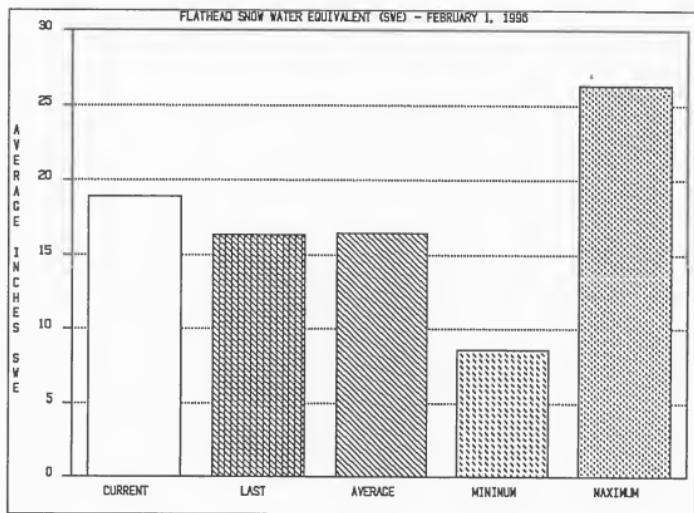
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

Reservoir Storage (1000AF) End of January

Reservoir	Usable Capacity	***** Usable Storage *****			Average
		This Year	Last Year	Average	
CAMAS (4)			NO REPORT		
MISSION VALLEY (8)			NO REPORT		
HUNGRY HORSE	3451.0	2820.0	1635.0	2362.0	
FLATHEAD LAKE	1791.0	1572.0	962.9	1095.0	

Watershed Snowpack Analysis

Watershed	Number of Data Sites	This Year as Percent of Last Year	This Year as Percent of Average
NORTH FORK in CANADA	2	118	117
NORTH FORK in MONTANA	7	116	123
MIDDLE FORK	6	112	108
SOUTH FORK	6	108	106
STILLWATER-WHITEFISH	5	108	124
SWAN	6	111	111
MISSION VALLEY	2	102	120
LITTLE BITTERROOT-ASHLEY	0	0	0
JOCKO	5	140	117
FLATHEAD in MONTANA	28	115	115
FLATHEAD RIVER BASIN	30	116	115



AVERAGE IS FOR THE PERIOD 1961-1990.

MINIMUM SNOW WATER EQUIVALENT, 1961-1995, OCCURRED IN WATER YEAR 1977.

MAXIMUM SNOW WATER EQUIVALENT, 1961-1995, OCCURRED IN WATER YEAR 1972.

UPPER CLARK FORK RIVER BASIN as of February 1, 1996

Snowpack conditions in the Upper Clark Fork River Basin were above average. Snow water content was 16 percent above average and 30 percent above last year.

Mountain precipitation during January was 20 percent above average and 68 percent above last year. Valley precipitation during January was 28 percent above average and 134 percent above last year. Water year precipitation for the basin, beginning October 1, 1995, was 39 percent above average and 37 percent above last year.

Reservoir storage on the last day of January was 24 percent above average and 20 percent above last year. Georgetown Lake storage was 4 percent above average and the same as last year; Lower Willow Creek storage was 167 percent above average and 186 percent above last year; and Nevada Creek storage was 100 percent above average and 87 percent above last year.

Streamflows, for the period April through July, are forecast to be 12 percent above average and 44 percent above last years forecasts.

Surface Water Supply Indexes (SWSI's) were 1.9 in the Clark Fork River above Rock Creek; 1.9 in the Blackfoot River; and 1.9 in the Clark Fork River above Missoula.

Streamflow Forecasts

Forecast Pt Forecast Period	<--- Drier --- Future Conditions --- Wetter --->					30 Yr Avg (1000AF)	
	Chance of Exceeding *		(1000AF) (%)	(1000AF) (%)	(1000AF) (%)		
	90%	70%					
MOULTON RES Inflow (million gal.)							
APR-JUN	135	189	225	106	261	315	212
APR-JUL	144	204	245	105	286	346	234
WARM SPRINGS CK at Anaconda (2)							
APR-JUL	27	34	39	103	44	51	38
APR-SEP	35	43	48	102	54	62	47
LITTLE BLACKFOOT nr Garrison							
APR-JUL	45	75	95	114	115	145	83
APR-SEP	52	84	105	118	126	158	89
FLINT CK nr Southern Cross (2)							
APR-JUL	9.5	13.4	16.0	113	18.6	23	14.2
APR-SEP	10.8	15.7	19.0	114	22	27	16.7
FLINT CK b1 Boulder Ck							
APR-JUL	33	47	57	100	67	81	57
APR-SEP	44	61	73	100	85	102	73
LOWER WILLOW CK RES Inflow							
APR-JUL	7.4	11.3	14.0	100	16.7	21	14.0
APR-SEP	8.2	12.2	15.0	101	17.8	22	14.8

Streamflow Forecasts (continued)

Forecast Pt Forecast Period	<--- Drier --- Future Conditions --- Wetter --->						30 Yr Avg (1000AF)	
	Chance of Exceeding *							
	90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	30% (% AVG.)	10% (1000AF)			
MF ROCK CREEK nr Philipsburg								
APR-JUL	58	69	77	117	85	96	66	
APR-SEP	64	77	85	115	93	106	74	
ROCK CREEK near Clinton								
APR-JUL	284	338	375	127	412	466	296	
APR-SEP	319	379	420	126	461	521	333	
NEVADA CK nr Finn								
APR-JUL	12.2	16.4	19.2	101	22	26	19.1	
APR-SEP	13.2	17.6	21	98	24	28	21	
CLEARWATER nr Clearwater								
APR-JUL	173	189	200	116	211	227	172	
APR-SEP	182	199	210	116	221	238	181	
BLACKFOOT RIVER near Bonner								
APR-JUL	717	826	900	108	974	1083	835	
APR-SEP	801	920	1000	108	1080	1199	926	
CLARK FORK ab Milltown								
APR-JUL	494	647	750	115	853	1006	652	
APR-SEP	588	756	870	115	984	1152	755	
CLARK FORK ab Missoula								
APR-JUL	1267	1495	1650	111	1805	2033	1487	
APR-SEP	1453	1701	1870	111	2039	2287	1681	

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

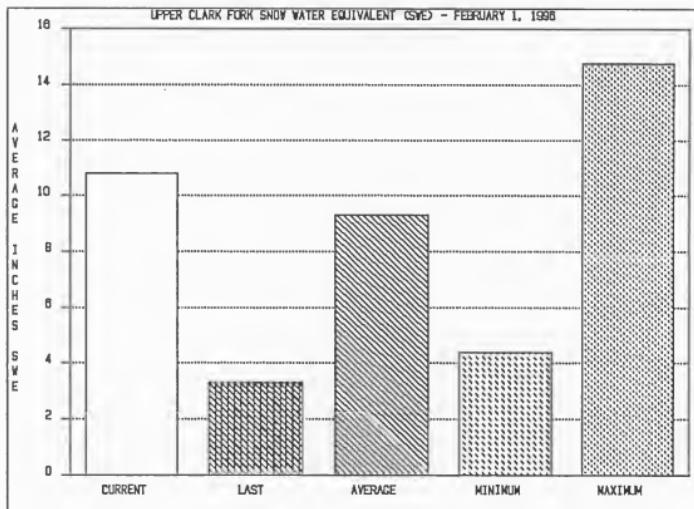
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

Reservoir Storage (1000AF) End of January

Reservoir	Usable	***** Usable Storage *****		
	Capacity	This Year	Last Year	Average
GEORGETOWN LAKE	31.0	28.2	28.1	27.0
LOWER WILLOW CREEK		NO REPORT		
NEVADA CREEK		NO REPORT		

Watershed Snowpack Analysis

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
CLARK FORK ab FLINT CREEK	9	116	113
FLINT CREEK	6	119	112
ROCK CREEK	3	124	124
CLARK FORK ab BLACKFOOT	15	121	116
BLACKFOOT	14	140	115
UPPER CLARK FORK BASIN	27	130	116



AVERAGE IS FOR THE PERIOD 1961-1990.

MINIMUM SNOW WATER EQUIVALENT, 1961-1995, OCCURRED IN WATER YEAR 1977.

MAXIMUM SNOW WATER EQUIVALENT, 1961-1995, OCCURRED IN WATER YEAR 1972.

BITTERROOT RIVER BASIN as of February 1, 1996

Snowpack conditions in the Bitterroot River Basin were above average. Snow water content was 21 percent above average and 35 percent above last year.

Mountain precipitation during January was 16 percent above average and 59 percent above last year. Valley precipitation during January was 40 percent above average and 67 percent above last year. Water year precipitation for the basin, beginning October 1, 1995, was 57 percent above average and 55 percent above last year.

Reservoir storage on the last day of January was 50 percent above average and 61 percent above last year. Painted Rocks Lake storage was NOT REPORTED and Como storage was 50 percent above average and 61 percent above last year.

Streamflows, for the period April through July, are forecast to be 27 percent above average and 61 percent above last years forecasts.

Surface Water Supply Index (SWSI) was 2.8 in the Bitterroot River.

Streamflow Forecasts

Forecast Pt Forecast Period	<-- Drier -- Future Conditions --- Wetter -->						30 Yr Avg (1000AF)	
	Chance of Exceeding *							
	90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	30% (% AVG.) (1000AF)	10% (1000AF)			
WF BITTERROOT nr Conner (2)								
APR-JUL	158	183	200	132	217	242	152	
APR-SEP	176	202	220	133	238	264	166	
BITTERROOT nr Darby								
APR-JUL	517	587	635	129	683	753	491	
APR-SEP	579	651	700	130	749	821	540	
ROCK CK nr Darby (2)								
APR-JUL	69	78	83	105	89	97	79	
APR-SEP	74	82	88	106	94	102	83	
SKALKAHO CK nr Hamilton								
APR-JUL	47	53	57	124	61	67	46	
APR-SEP	54	60	65	123	70	76	53	
BURNT FORK CK nr Stevensville (2)								
APR-JUL	29	34	37	128	40	45	29	
APR-SEP	34	39	43	126	47	52	34	

Streamflow Forecasts (continued)

Forecast Pt Forecast Period	<--- Drier --- Future Conditions --- Wetter --->						30 Yr Avg (1000AF)
	Chance of Exceeding *			30%	10%		
	90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	(% AVG.)	(1000AF)	(1000AF)	
BITTERROOT at Missoula							
APR-JUL	1390	1545	1650	127	1755	1910	1301
APR-SEP	1526	1689	1800	127	1911	2074	1418

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

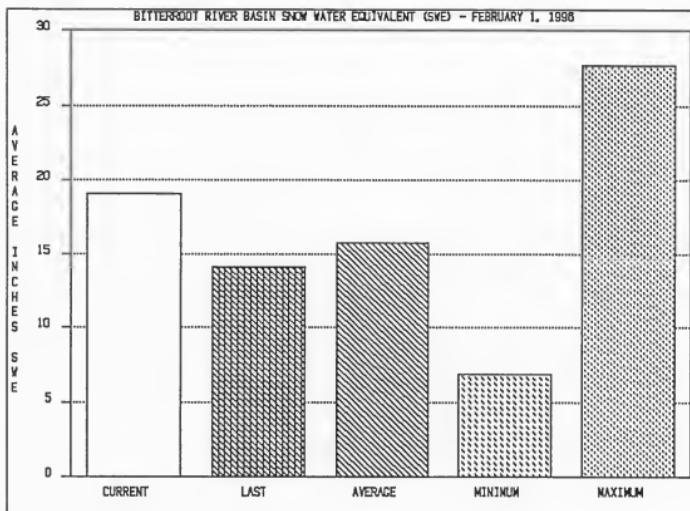
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

Reservoir Storage (1000AF) End of January

Reservoir	Usable Capacity	*****	Usable Storage	*****	Average
PAINTED ROCKS LAKE		NO REPORT			
COMO	34.9		16.7	10.4	11.1

Watershed Snowpack Analysis

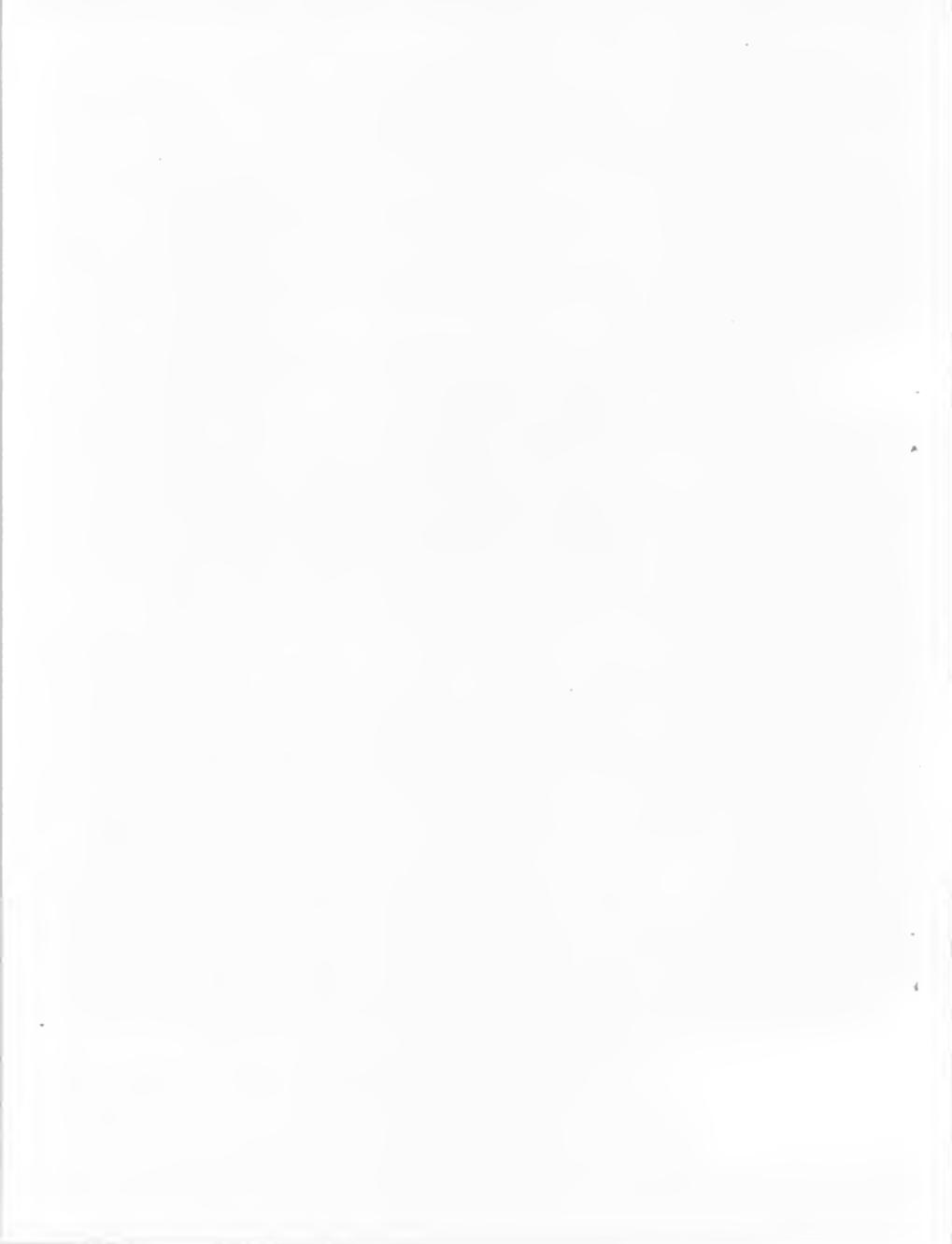
Watershed	Number of Data Sites	This Year as Percent of Last Year	This Year as Percent of Average
WEST FORK BITTERROOT	2	152	142
EAST SIDE BITTERROOT	3	151	139
WEST SIDE BITTERROOT	3	121	108
BITTERROOT RIVER BASIN	7	135	121



AVERAGE IS FOR THE PERIOD 1961-1990.

MINIMUM SNOW WATER EQUIVALENT, 1961-1995, OCCURRED IN WATER YEAR 1977.

MAXIMUM SNOW WATER EQUIVALENT, 1961-1995, OCCURRED IN WATER YEAR 1972.



LOWER CLARK FORK RIVER BASIN as of February 1, 1996

Snowpack conditions in the Lower Clark Fork River Basin are near average. Snow water content was 2 percent below average and 12 percent above last year.

Mountain precipitation during January was 21 percent above average and 59 percent above last year. Valley precipitation during January was 34 percent above average and 94 percent above last year. Water year precipitation for the basin, beginning October 1, 1995, was 50 percent above average and 45 percent above last year. Noxon Rapids storage on the last day of January was 3 percent above average and 1 percent below last year.

Streamflows, for the period April through July, are forecast to be 18 percent above average and 45 percent above last years forecasts.

Surface Water Supply Indexes (SWSI's) were 2.6 in the Clark Fork River below Bitterroot River and 2.5 in the Clark Fork River below Flathead River.

Streamflow Forecasts

Forecast Pt Forecast Period	<-- Drier -- Future Conditions --- Wetter -->					30 Yr Avg (1000AF)	
	90% (1000AF)	70% (1000AF)	Chance of Exceeding * 50% (Most Prob) (1000AF)	30% (% AVG.) (1000AF)	10% (1000AF)		
CLARK FORK ab Missoula							
APR-JUL	1267	1495	1650	111	1805	2033	1487
APR-SEP	1453	1701	1870	111	2039	2287	1681
CLARK FORK b1 Missoula							
APR-JUL	2711	3062	3300	118	3539	3890	2788
APR-SEP	3034	3413	3670	118	3927	4306	3099
CLARK FORK at St. Regis (1)							
APR-JUL	2955	3976	4440	120	4904	5925	3686
APR-SEP	3291	4425	4940	121	5455	6589	4095
CLARK FORK nr Plains (1,2)							
APR-JUL	9401	11463	12400	119	13337	15399	10450
APR-SEP	10303	12570	13600	119	14630	16897	11470
THOMPSON RIVER nr Thompson Falls							
APR-JUL	200	233	255	119	277	310	214
APR-SEP	231	266	290	121	314	349	240
PROSPECT CREEK at Thompson Falls							
APR-JUL	96	112	123	100	134	150	123
APR-SEP	105	122	133	101	144	161	132

Streamflow Forecasts (continued)

Forecast Pt Forecast Period	<--- Drier --- Future Conditions --- Wetter -->		Chance of Exceeding *	30% (1000AF)	10% (1000AF)	30 Yr Avg (1000AF)
	90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	% AVG.)		
CLARK FK at Whitehorse Rpd (1,2)						
APR-JUL	10162	12526	13600	116	14674	17038
APR-SEP	11217	13819	15000	116	16181	18783

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

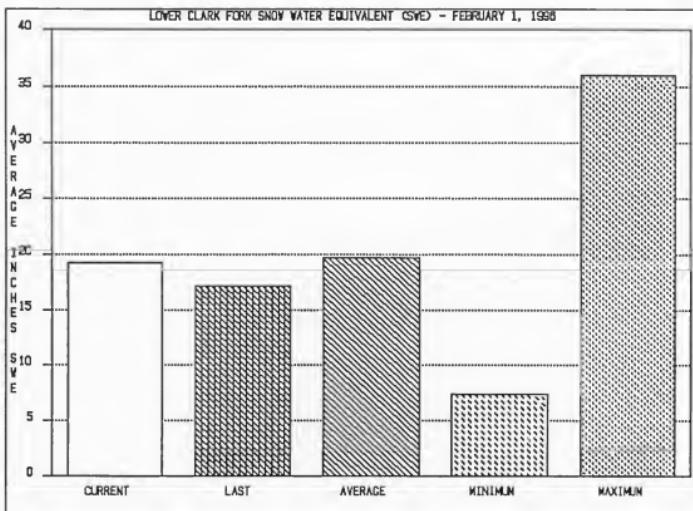
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

Reservoir Storage (1000AF) End of January

Reservoir	Usable Capacity	***** Usable Storage This Year	Last Year	Average
NOXON RAPIDS	335.0	324.4	326.5	314.2

Watershed Snowpack Analysis

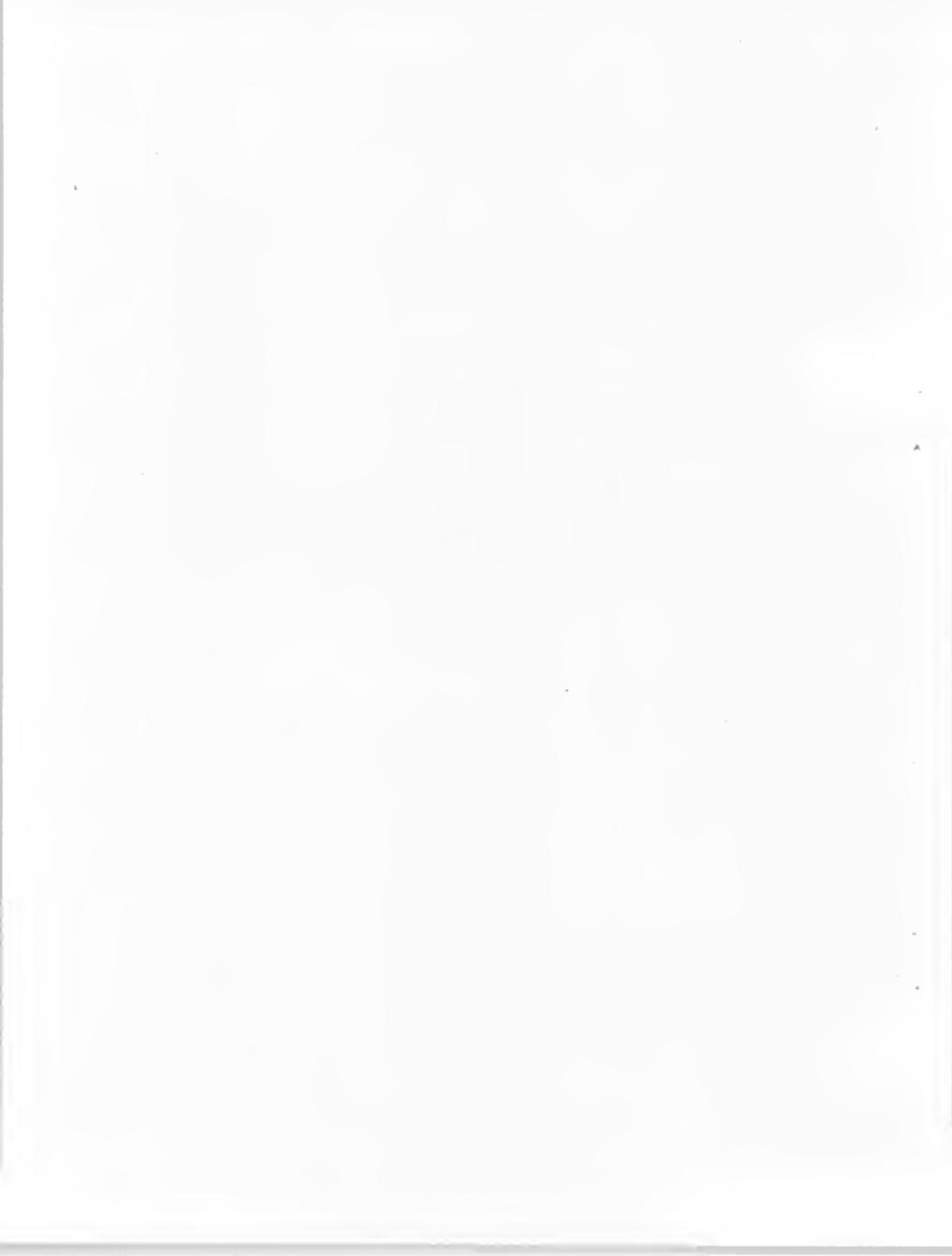
Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
LOWER CLARK FORK	8	115	101



AVERAGE IS FOR THE PERIOD 1961-1990.

MINIMUM SNOW WATER EQUIVALENT, 1961-1995, OCCURRED IN WATER YEAR 1977.

MAXIMUM SNOW WATER EQUIVALENT, 1961-1995, OCCURRED IN WATER YEAR 1972.



JEFFERSON RIVER BASIN as of February 1, 1996

Snowpack conditions in the Jefferson River Basin were above average. Snow water content was 19 percent above average and 4 percent above last year.

Mountain precipitation during January was 17 percent above average and 27 percent above last year. Valley precipitation during January was 52 percent above average and 29 percent above last year. Water year precipitation for the basin, beginning October 1, 1995, was 9 percent above average and 11 percent below last year.

Reservoir storage on the last day of January was 14 percent above average and 55 percent above last year. Lima storage was 46 percent above average and 301 percent above last year; Clark Canyon storage was 8 percent above average and 33 percent above last year; and Ruby River storage was 8 percent above average and 35 percent above last year.

Streamflows, for the period April through July, are forecast to be 18 percent above average and 13 percent above last years forecasts.

Surface Water Supply Indexes (SWSI's) were 2.1 in the Beaverhead River; 1.1 in the Ruby River; 2.7 in the Big Hole River; 0.8 in the Boulder River; and 2.2 for the Jefferson River as a whole.

Streamflow Forecasts

Forecast Pt Forecast Period	<-- Drier -- Future Conditions --- Wetter -->						30 Yr Avg (1000AF)	
	Chance of Exceeding *							
	90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	30% (% AVG.) (1000AF)	10% (1000AF)			
RED ROCK RIVER near Monida (2)								
APR-JUL	77	97	110	113	123	143	97	
APR-SEP	80	104	120	114	136	160	105	
BEAVERHEAD RIVER near Grant (2)								
APR-JUL	122	150	170	129	190	218	132	
APR-SEP	138	175	200	129	225	262	155	
BEAVERHEAD RIVER at Barretts (2)								
APR-JUL	158	189	210	122	231	262	172	
APR-SEP	188	222	245	121	268	302	203	
RUBY RIVER near Alder								
APR-JUL	57	75	87	105	99	117	83	
APR-SEP	70	91	105	106	119	140	99	
BIG HOLE RIVER near Melrose								
APR-JUL	522	655	745	116	835	968	641	
APR-SEP	575	715	810	116	905	1045	697	
BOULDER RIVER near Boulder								
APR-JUL	53	75	90	106	105	127	85	
APR-SEP	59	82	97	107	112	135	91	

Streamflow Forecasts (continued)

Forecast Pt Forecast Period	<--- Drier --- Future Conditions --- Wetter --->						30 Yr Avg (1000AF)	
	Chance of Exceeding *							
	90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	30% (% AVG.)	10% (1000AF)			
WILLOW CREEK near Harrison								
APR-JUL	6.3	13.4	18.2	103	23	30	17.7	
APR-SEP	6.1	14.4	20	100	26	34	20	
JEFFERSON RIVER near Three Forks (2)								
APR-JUL	767	968	1105	120	1242	1443	920	
APR-SEP	862	1078	1225	121	1372	1588	1012	

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

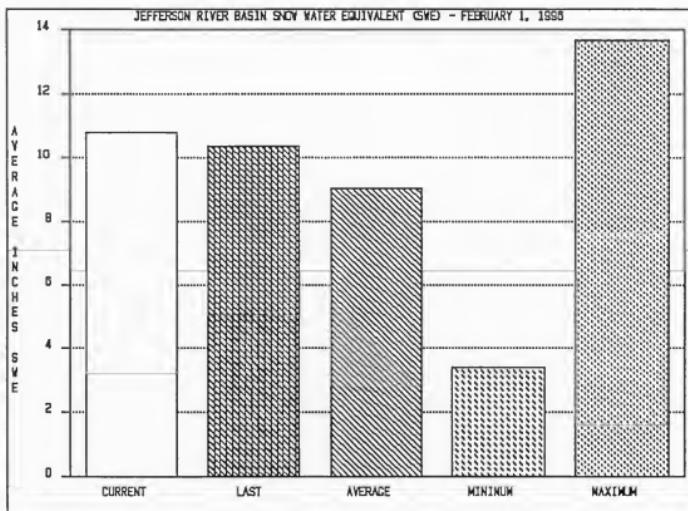
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

Reservoir Storage (1000AF) End of January

Reservoir	Usable Capacity	***** Usable Storage *****	This Year	Last Year	Average
LIMA	84.0	48.9	12.2		33.4
CLARK CANYON	255.6	156.0	117.5		144.7
RUBY RIVER		NO REPORT			

Watershed Snowpack Analysis

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
BEAVERHEAD	8	99	120
RUBY	4	94	116
BIGHOLE	9	125	131
BOULDER	7	87	97
JEFFERSON RIVER BASIN	23	104	119



AVERAGE IS FOR THE PERIOD 1961-1990.

MINIMUM SNOW WATER EQUIVALENT, 1961-1995, OCCURRED IN WATER YEAR 1977.

MAXIMUM SNOW WATER EQUIVALENT, 1961-1995, OCCURRED IN WATER YEAR 1965.



MADISON RIVER BASIN as of February 1, 1996

Snowpack conditions in the Madison River Basin were above average. Snow water content was 20 percent above average and 10 percent below last year.

Mountain precipitation during January was 19 percent above average and 9 percent below last year. Valley precipitation during January was 10 percent below average and 71 percent below last year. Water year precipitation for the basin, beginning October 1, 1995, was 22 percent above average and 14 percent below last year.

Reservoir storage on the last day of January was 1 percent above average and 4 percent below last year. Ennis Lake storage was 11 percent below average and 3 percent below last year and Hebgen Lake storage was 2 percent above average and 4 percent below last year.

Streamflows, for the period April through July, are forecast to be 13 percent above average and 9 percent below last years forecasts.

Surface Water Supply Index (SWSI) was 2.2 for the Madison River.

Streamflow Forecasts

Forecast Pt Forecast Period	<--- Drier --- Future Conditions --- Wetter --->						30 Yr Avg (1000AF)
	90% (1000AF)	70% (1000AF)	Chance of Exceeding * 50% (Most Prob) (1000AF)	30% (% AVG.) (1000AF)	10% (1000AF)		
MADISON RIVER near Grayling (2)							
APR-JUL	355	394	420	111	446	485	380
APR-SEP	461	508	540	111	572	619	486
MADISON RIVER near McAllister (2)							
APR-JUL	643	713	760	115	807	877	662
APR-SEP	821	898	950	114	1002	1079	831

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

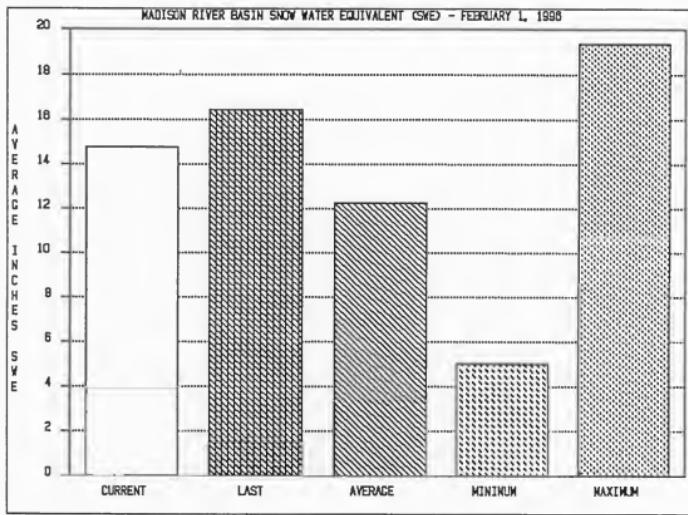
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

Reservoir Storage (1000AF) End of January

Reservoir	Usable Capacity	***** This Year	Usable Storage Last Year	***** Average
ENNIS LAKE	41.0	30.3	31.2	34.0
HEBGEN LAKE	377.5	252.0	261.4	246.8

Watershed Snowpack Analysis

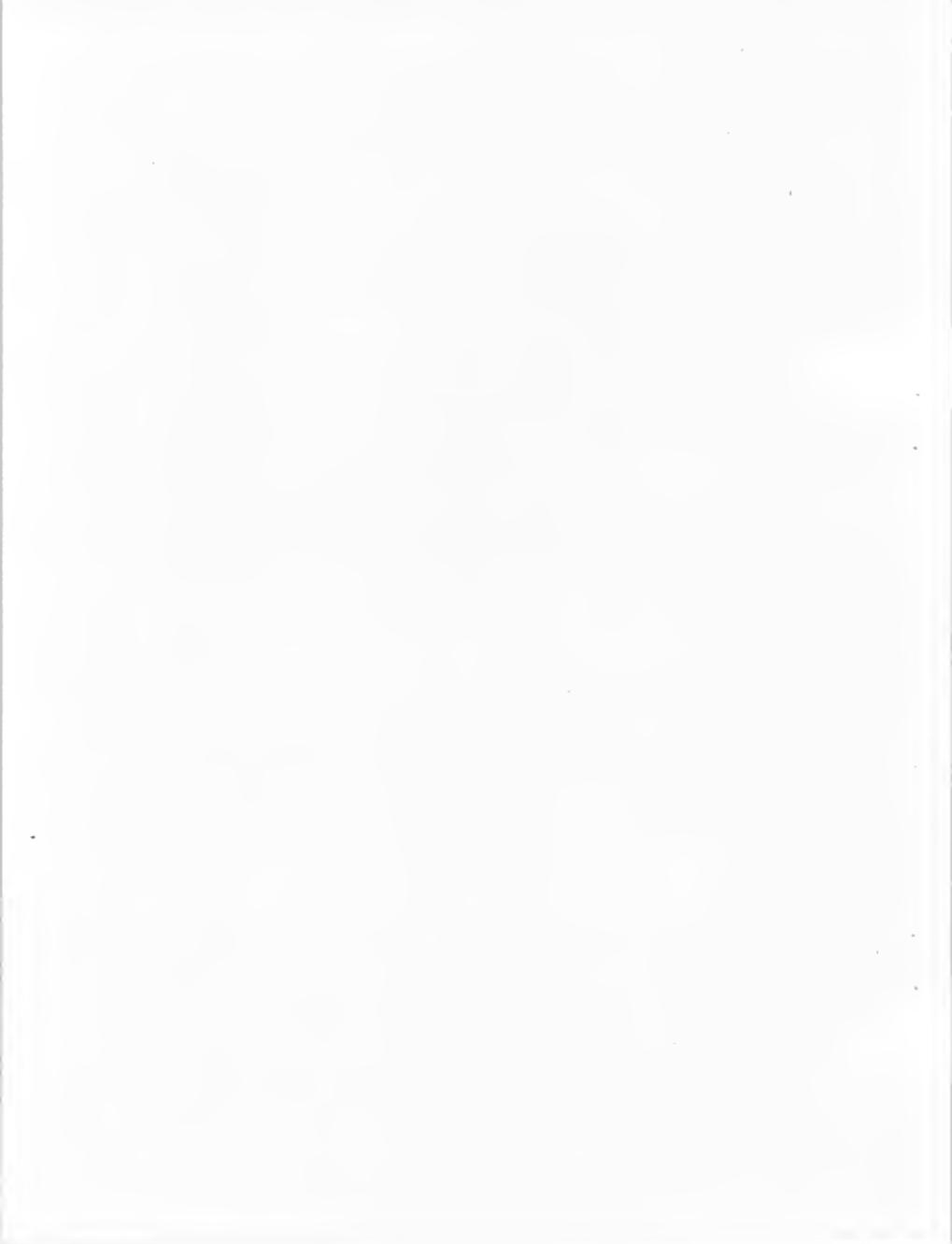
Watershed	Number of Data Sites	This Year as Percent of Last Year	This Year as Percent of Average
MADISON above HEBGEN LAKE	6	84	119
MADISON below HEBGEN LAKE	7	96	122
MADISON RIVER BASIN	13	90	120



AVERAGE IS FOR THE PERIOD 1961-1990.

MINIMUM SNOW WATER EQUIVALENT, 1961-1995, OCCURRED IN WATER YEAR 1977.

MAXIMUM SNOW WATER EQUIVALENT, 1961-1995, OCCURRED IN WATER YEAR 1965.



GALLATIN RIVER BASIN as of February 1, 1996

Snowpack conditions in the Gallatin River Basin were above average. Snow water content was 12 percent above average and 3 percent above last year.

Mountain precipitation during January was 20 percent above average and 23 percent above last year. Valley precipitation during January was 12 percent below average and 59 percent below last year. Water year precipitation for the basin, beginning October 1, 1995, was 28 percent above average and 15 percent above last year.

Middle Creek storage on the last day of January was NOT REPORTED.

Streamflows, for the period April through July, are forecast to be 8 percent above average and 4 percent above last years forecasts.

Surface Water Supply Index (SWSI) was 1.8 for the Gallatin River.

Streamflow Forecasts								
Forecast Pt Forecast Period	<--- Drier --- Future Conditions --- Wetter --->							
	90%		70%		Chance of Exceeding *		30%	
	(1000AF)	(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
GALLATIN RIVER near Gateway								
APR-JUL	399	447	480	109	513	561	441	
APR-SEP	472	524	560	108	596	648	518	
E & W FK HYALITE CREEK near Bozeman								
APR-JUL	19.0	22	24	102	25	28	23	
APR-SEP	22	25	27	102	28	31	26	
HYALITE CREEK near Bozeman (2)								
APR-JUL	30	34	37	103	40	45	36	
APR-SEP	35	40	43	102	46	51	42	
GALLATIN RIVER at Logan (2)								
APR-JUL	393	478	535	107	592	677	498	
APR-SEP	478	565	625	108	685	772	581	

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

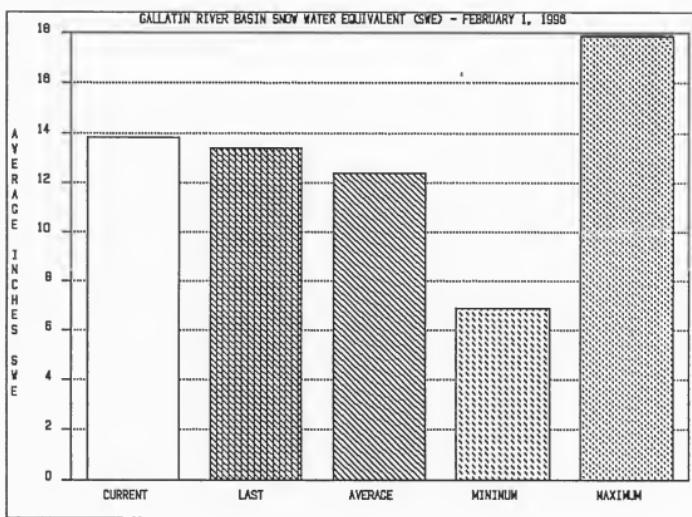
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

Reservoir Storage (1000AF) End of January

Reservoir	Usable Capacity	*****	Usable Storage This Year	*****	Last Year	*****	Average
MIDDLE CREEK			NO REPORT				

Watershed Snowpack Analysis

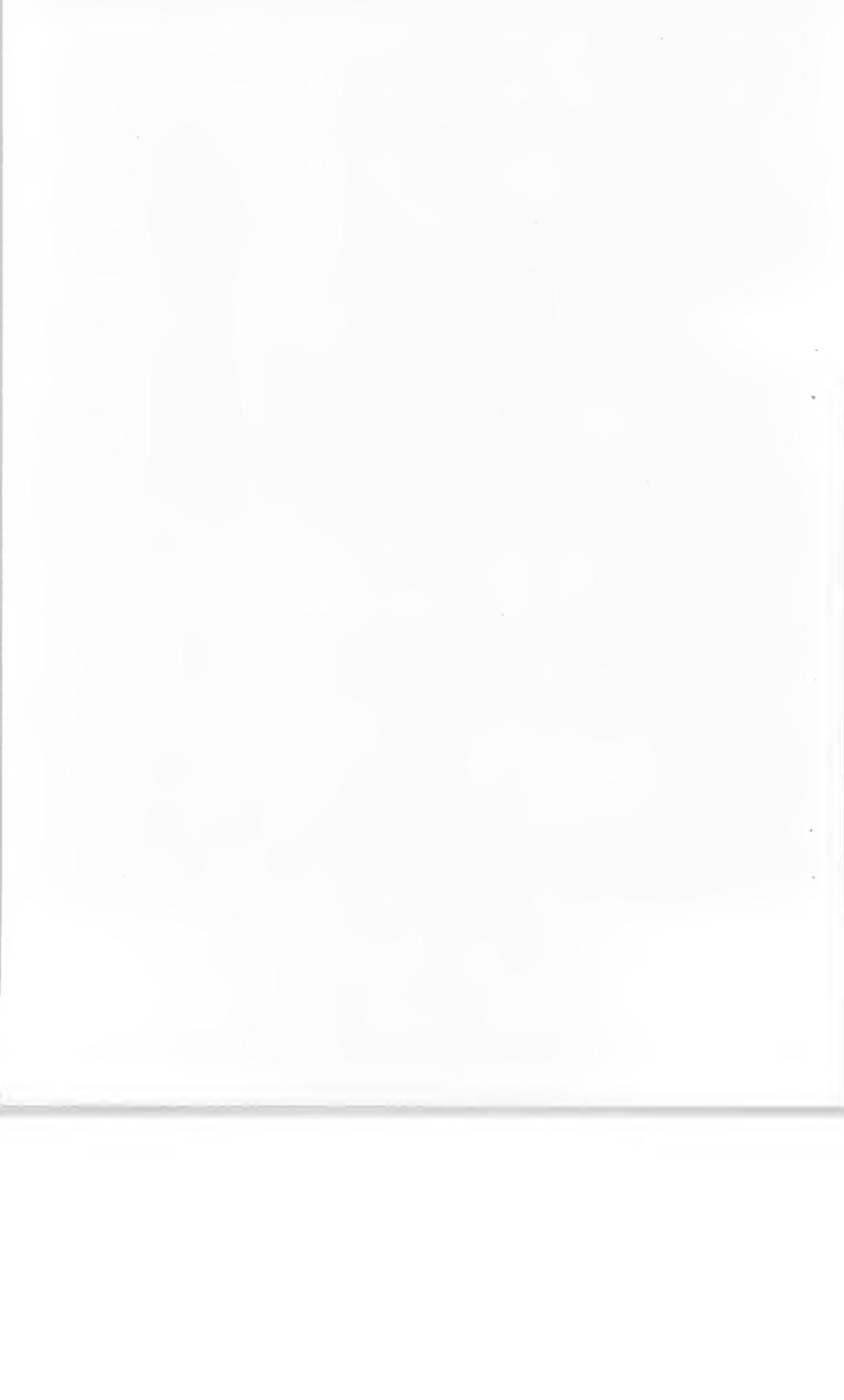
Watershed	Number of Data Sites	This Year as Percent of Last Year	This Year as Percent of Average
UPPER GALLATIN	4	103	128
HYALITE	3	105	98
BRIDGER	2	101	97
GALLATIN RIVER BASIN	9	103	112



AVERAGE IS FOR THE PERIOD 1961-1990.

MINIMUM SNOW WATER EQUIVALENT, 1961-1995, OCCURRED IN WATER YEAR 1981.

MAXIMUM SNOW WATER EQUIVALENT, 1961-1995, OCCURRED IN WATER YEAR 1965.



MISSOURI MAINSTEM RIVER BASIN as of February 1, 1996

Snowpack conditions for the Missouri Mainstem River Basin were near average. Snow water content was 2 percent below average and 13 percent above last year. Snow water content in the Headwaters Mainstem was 3 percent above average and 5 percent above last year; the Sun-Teton-Marias was 6 percent above average and 20 percent above last year; and the Smith-Judith-Musselshell was at average and 10 percent above last year.

Mountain precipitation during January was 19 percent above average and 90 percent above last year. Valley precipitation during January was 13 percent above average and 402 percent above last year. Water year precipitation for the basin, beginning October 1, 1995, was 14 average and 15 percent above last year.

Reservoir storage on the last day of January was 3 percent above average and 8 percent above last year. Canyon Ferry Lake storage was 3 percent above average and 9 percent above last year; Helena Valley storage was 4 percent above average and 9 percent above last year; Lake Helena storage was 6 percent above average and 2 percent below last year; Hauser & Helena storage was 3 percent above average and 1 percent below last year; Holter Lake storage was 11 percent above average and the same as last year; and Fort Peck Lake storage was 5 percent above average and 8 percent above last year.

Streamflows, for the period April through July, are forecast to be 17 percent above average 10 percent above last years forecasts.

Surface Water Supply Indexes (SWSI's) were 2.4 in the Missouri River above Canyon Ferry; 2.2 in the Missouri River below Canyon Ferry; 2.5 in the Missouri River above Fort Peck; and 1.6 in the Missouri River below Fort Peck.

Streamflow Forecasts							
Forecast Pt Forecast Period	<-- Drier -- Future Conditions -- Wetter -->						
	90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	30% (1000AF)	10% (1000AF)	30 Yr Avg (1000AF)	
MISSOURI RIVER at Toston (2)							
APR-JUL	1560	2025	2340	113	2655	3120	2075
APR-SEP	2054	2386	2720	113	3054	3382	2416
PRICKLY PEAR CREEK near Clancy							
APR-JUL	6.7	16.4	23	100	30	39	23
APR-SEP	8.6	19.6	27	100	34	45	27
SUN RIVER at Gibson Dam (2)							
APR-JUL	371	451	505	106	559	639	478
APR-SEP	414	498	555	106	612	696	526
MISSOURI RIVER at Fort Benton (2)							
APR-JUL	2624	3076	3600	117	4124	4631	3087
APR-SEP	3090	3739	4290	117	4841	5480	3678

Streamflow Forecasts (continued)

Forecast Pt Forecast Period	<--- Drier --- Future Conditions --- Wetter -->						30 Yr Avg (1000AF)	
	Chance of Exceeding *							
	90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	30% (1000AF)	10% (1000AF)			
MARIAS RIVER near Shelby (2)								
APR-JUL	331	438	510	114	582	689	447	
APR-SEP	357	466	540	111	614	723	487	
MISSOURI RIVER at Virgelle (2)								
APR-JUL	2948	3745	4210	117	4675	5680	3595	
APR-SEP	3458	4486	4940	117	5394	6663	4217	
MISSOURI RIVER near Landusky (2)								
APR-JUL	3273	4279	4675	120	5071	6352	3897	
APR-SEP	3847	5130	5500	120	5870	7465	4580	
MISSOURI RIVER below Fort Peck (2)								
APR-JUL	3252	4281	4750	118	5219	6544	4015	
APR-SEP	3618	5011	5460	122	5909	7281	4467	
LAKE SAKAKAWEA Inflow (2)								
APR-JUL	9303	11112	12370	125	13628	15835	9897	
APR-SEP	10665	12802	14330	126	15858	18154	11346	

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

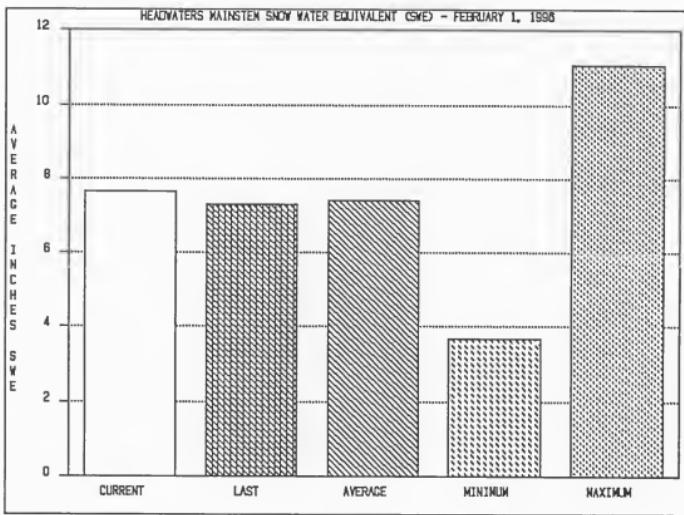
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

Reservoir Storage (1000AF) End of January

Reservoir	Usable Capacity	***** Usable Storage *****			Average
		This Year	Last Year	Average	
CANYON FERRY LAKE	2043.0	1637.0	1500.0	1596.0	
HELENA VALLEY	9.2	4.9	4.5	4.7	
LAKE HELENA	10.4	10.9	11.1	10.3	
HAUSER & HELENA	61.9	63.1	63.7	61.3	
HOLTER LAKE	81.9	81.2	81.1	72.9	
FORT PECK LAKE (MAF)	18.9	15.6	14.4	14.9	

Watershed Snowpack Analysis

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
HEADWATERS MAINSTEM	8	105	103
SUN-TETON-MARIAS BASINS	7	120	106
SMITH-JUDITH-MUSSELSHELL	8	110	100
MAINSTEM ab FORT PECK RES	22	114	102
MILK	5	110	40
MISSOURI MAINSTEM BASIN	27	113	98



AVERAGE IS FOR THE PERIOD 1961-1990.

MINIMUM SNOW WATER EQUIVALENT, 1961-1995, OCCURRED IN WATER YEAR 1961.

MAXIMUM SNOW WATER EQUIVALENT, 1961-1995, OCCURRED IN WATER YEAR 1972.

SMITH-JUDITH-MUSSELSHELL RIVER BASINS as of February 1, 1996

Snowpack conditions in the Smith-Judith-Musselshell River Basins were at average. Snow water content in the Smith River Basin was 14 percent above average and 22 percent above last year; in the Judith River Basin was 5 percent below average and 12 percent above last year; and in the Musselshell River Basin was 12 percent below average and 3 percent above last year.

Mountain and valley precipitation in the Smith River Basin during January was 31 percent above average and 74 percent above last year; in the Judith River Basin during January was 5 percent above average and 82 percent above last year; and in the Musselshell River Basin during January was 94 percent above average and 183 percent above last year. Water year precipitation, beginning October 1, 1995, in the Smith-Judith-Musselshell River Basins was 16 percent above average and 19 percent above last year.

Reservoir storage on the last day of January was 42 percent above average and 42 percent above last year. Smith River storage was 41 percent above average and 89 percent above last year; Newlan Creek storage [NO REPORT]; Bair storage was 37 percent above average and 73 percent above last year; Martinsdale storage was 48 percent above average and 224 percent above last year; and Deadman's Basin was 41 percent above average and 20 percent above last year.

Streamflows, for the period April through July, are forecast to be 11 percent above average and 27 percent above last years forecasts.

Surface Water Supply Index (SWSI) was 1.7 in the Smith River and 1.3 in the Musselshell River.

Streamflow Forecasts

		<--- Drier --- Future Conditions --- Wetter --->					
Forecast Pt	Forecast Period	Chance of Exceeding *					30 Yr Avg
		90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	30% (% AVG.) (1000AF)	10% (1000AF)	(1000AF)
SMITH RIVER near Fort Logan							
APR-JUL		47	62	72	116	82	97
APR-SEP		57	73	84	115	95	111
SHEEP CREEK nr White Sulphur Springs							
APR-JUL		15.7	18.5	20	112	22	25
APR-SEP		18.6	22	24	112	26	28
NF MUSSELSHELL near Delpine							
APR-JUL		2.51	3.90	4.85	101	5.80	7.19
APR-SEP		3.04	4.60	5.67	101	6.74	8.30

Streamflow Forecasts (continued)

Forecast Pt Forecast Period	<-- Drier -- Future Conditions -- Wetter -->						30 Yr Avg (1000AF)	
	Chance of Exceeding *							
	90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	30% (1000AF)	10% (1000AF)			
SF MUSSELSHELL abv Martinsdale								
APR-JUL	21	41	55	106	69	89	52	
APR-SEP	25	46	60	107	74	95	56	

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

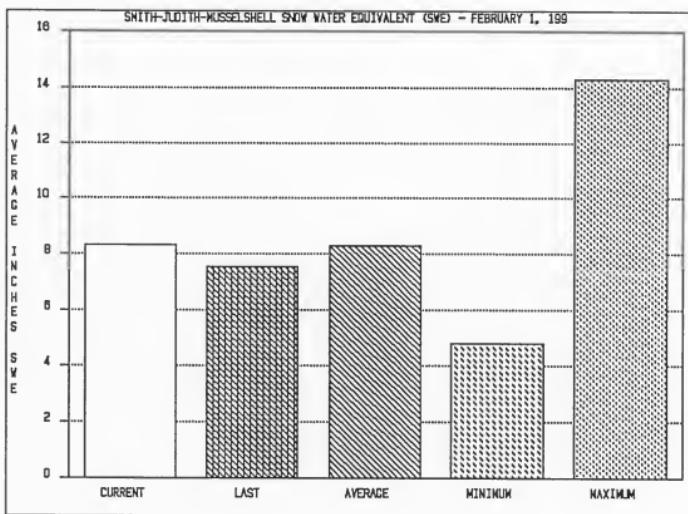
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

Reservoir Storage (1000AF) End of January

Reservoir	Usable Capacity	***** Usable Storage *****			Average
		This Year	Last Year	Average	
SMITH RIVER	10.6	8.9	4.7	6.3	
NEWLAN CREEK		NO REPORT			
BAIR	7.0	5.2	3.0	3.8	
MARTINSDALE	23.1	13.6	4.2	9.2	
DEADMAN'S BASIN	72.2	60.7	50.4	43.0	

Watershed Snowpack Analysis

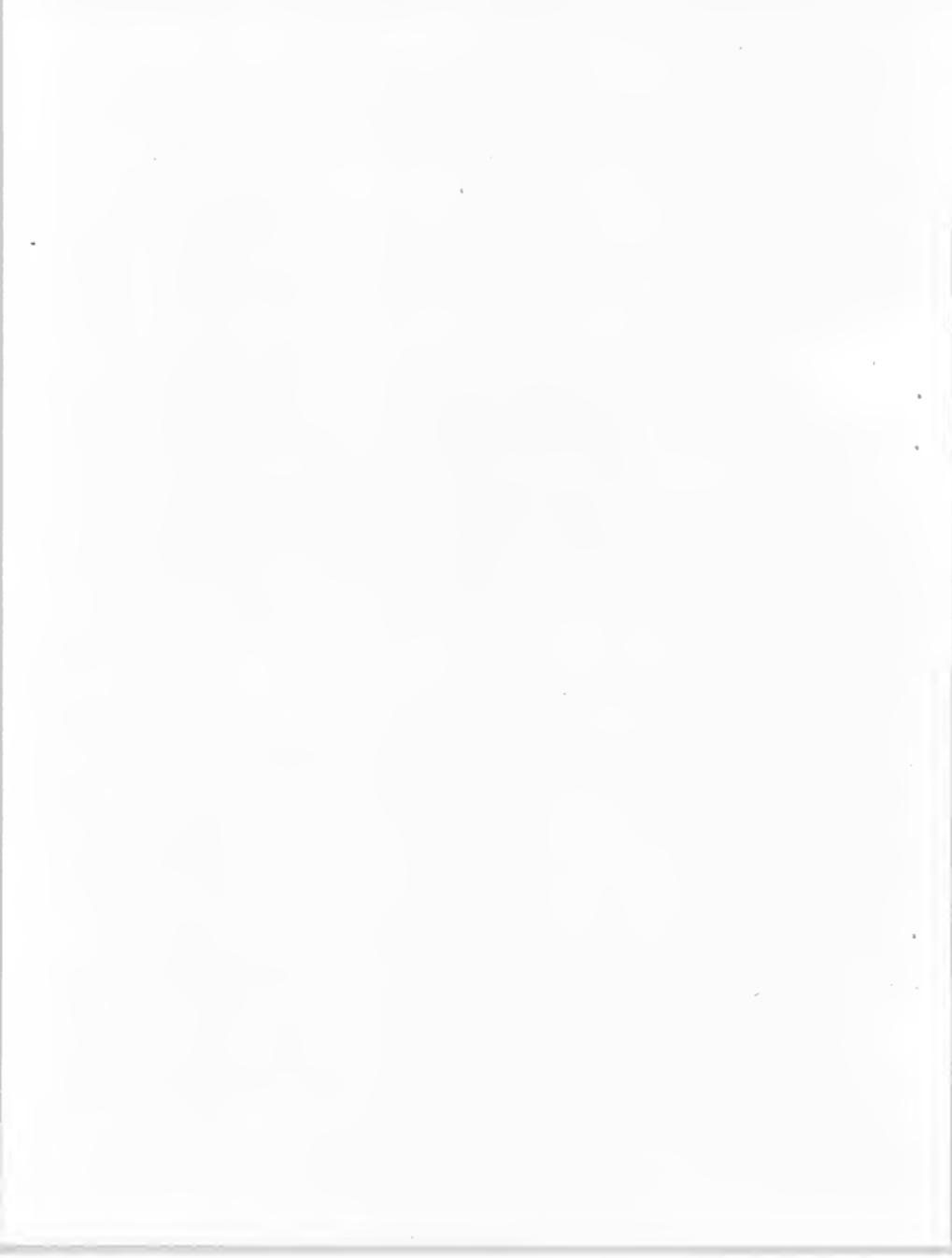
Watershed	Number of Data Sites	This Year as Percent of Last Year		Average
		Last Year	Average	
SMITH	4	122	114	
JUDITH	4	112	95	
MUSSELSHELL	3	103	88	
SMITH-JUDITH-MUSSELSHELL	8	110	100	



AVERAGE IS FOR THE PERIOD 1961-1990.

MINIMUM SNOW WATER EQUIVALENT, 1961-1995, OCCURRED IN WATER YEAR 1987.

MAXIMUM SNOW WATER EQUIVALENT, 1961-1995, OCCURRED IN WATER YEAR 1978.



SUN-TETON-MARIAS RIVER BASINS as of February 1, 1996

Snowpack conditions in the Sun-Teton-Marias River Basin are slightly above average. Snow water content in the Sun River Basin was 9 percent above average and 40 percent above last year; the Teton River Basin was 6 percent above average and 36 percent above last year; and the Marias River Basin was 6 percent above average and 13 percent above last year.

Mountain and valley precipitation during January in the Sun River Basin was 1 percent below average and 360 percent above last year; in the Teton River Basin was 26 percent above average and 201 percent above last year; and in the Marias River Basin was 2 percent above average and 139 percent above last year. Water year precipitation for the Sun-Teton-Marias river basins, beginning October 1, 1995, was 21 percent above average and 22 percent above last year.

Reservoir storage on the last day of January was 39 percent above average and 27 percent above last year. Gibson storage was 18 percent above average and 186 percent above last year; Pishkun storage was 16 percent above average and 0 percent of last year; Willow Creek storage was 25 percent above average and 42 percent above last year; Lower Two Medicine Lake storage was 57 percent above average and 2 percent above last year; Four Horns Lake storage was 41 percent below average and 35 percent below last year; Swift storage was 65 percent above average and 91 percent above last year; Lake Frances storage was 37 percent above average and 95 percent above last year; and Lake Elwell (Tiber) storage was 43 percent above average and 15 percent above last year.

Streamflows, for the period April through July, are forecast to be 11 percent above average and 31 percent above last years forecasts.

Surface Water Supply Indexes (SWSI's) were 1.9 in the Sun River; 1.9 in the Teton River; 2.4 in the Birch/Dupuyer Creeks; and 1.9 in the Marias River.

Streamflow Forecasts

Forecast Pt Forecast Period	<--- Drier --- Future Conditions --- Wetter --->					30 Yr Avg (1000AF)
	Chance of Exceeding *					
	90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	30% (1000AF)	10% (1000AF)	
SUN RIVER at Gibson Dam (2)						
APR-JUL	371	451	505	106	559	639
APR-SEP	414	498	555	106	612	696
TWO MEDICINE RIVER near Browning (2)						
APR-JUL	163	212	245	114	278	327
APR-SEP	178	227	260	114	293	342
BADGER CREEK near Browning (2)						
APR-JUL	84	106	120	115	134	156
APR-SEP	102	124	140	117	156	178
SWIFT RESERVOIR Inflow near Dupuyer						
APR-JUL	51	67	77	113	88	103
APR-SEP	62	79	90	113	101	118

Streamflow Forecasts (continued)

Forecast Pt Forecast Period	<-- Drier -- Future Conditions --- Wetter -->						30 Yr Avg (1000AF)	
	Chance of Exceeding *							
	90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	30% (% AVG.) (1000AF)	10% (1000AF)			
DUPUYER CREEK near Valier								
APR-JUL	2.3	11.4	17.6	114	24	33	15.5	
APR-SEP	3.7	13.3	19.8	114	26	36	17.4	
CUT BANK CREEK at Cut Bank								
APR-JUL	77	92	102	117	112	128	87	
APR-SEP	88	102	112	117	122	137	96	
MARIAS RIVER near Shelby (2)								
APR-JUL	331	438	510	114	582	689	447	
APR-SEP	357	466	540	111	614	723	487	

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

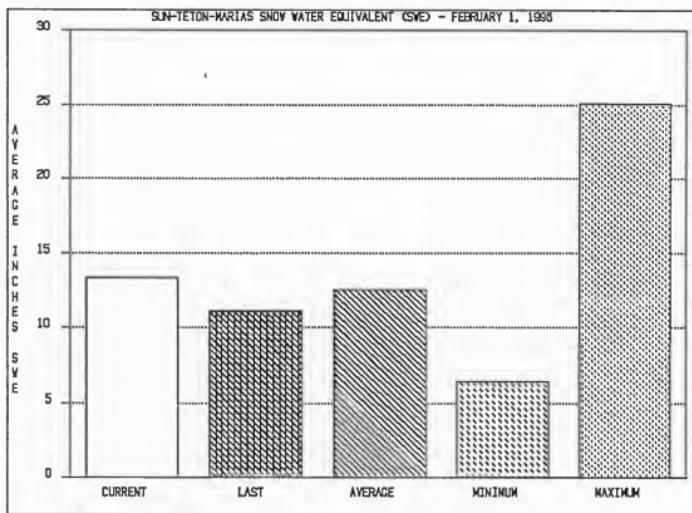
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

Reservoir Storage (1000AF) End of January

Reservoir	Usable Capacity	***** Usable Storage *****			Average
		This Year	Last Year	Average	
GIBSON	99.1	52.1	18.2	44.2	
PISHKUN	32.0	20.6	0.0	17.7	
WILLOW CREEK	32.2	26.5	18.6	21.2	
LOWER TWO MEDICINE LAKE	11.9	10.5	10.3	6.7	
FOUR HORNS LAKE	19.2	7.3	11.3	12.4	
SWIFT	30.0	25.2	13.2	15.3	
LAKE FRANCES	112.0	95.4	49.0	69.6	
LAKE ELWELL (TIBER)	1347.0	836.6	727.2	583.0	

Watershed Snowpack Analysis

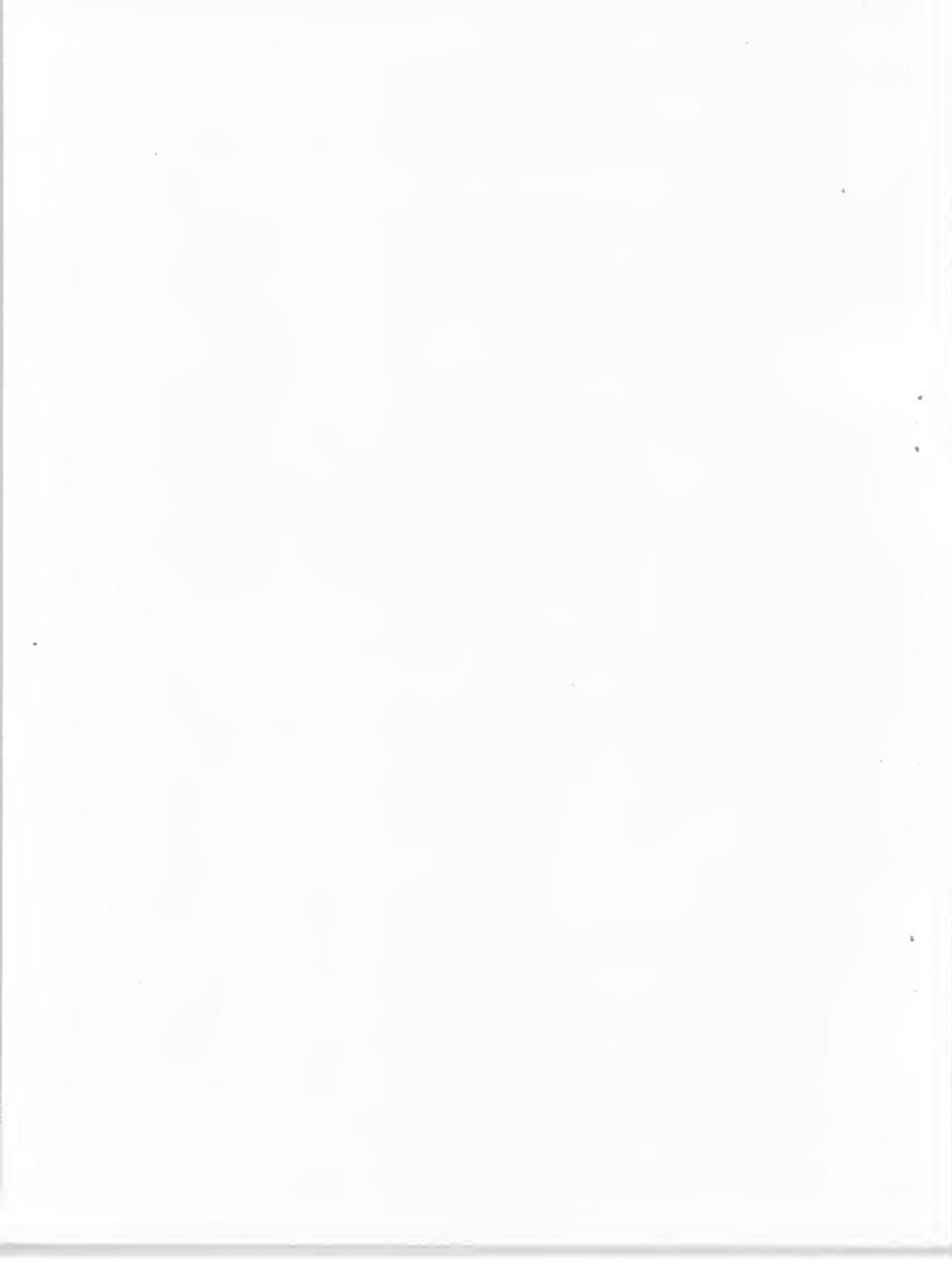
Watershed	Number of Data Sites	This Year as Percent of Last Year		Average
		Last Year	Average	
SUN	2	140		109
TETON	3	136		106
MARIAS	4	113		106
SUN-TETON-MARIAS BASINS	4	120		106



AVERAGE IS FOR THE PERIOD 1961-1990.

MINIMUM SNOW WATER EQUIVALENT, 1961-1995, OCCURRED IN WATER YEAR 1977.

MAXIMUM SNOW WATER EQUIVALENT, 1961-1995, OCCURRED IN WATER YEAR 1972.



ST. MARY and MILK RIVER BASINS as of February 1, 1996

Snowpack conditions in the St. Mary and Milk River Basins were near average. Snow water content in the St. Mary River Basin was 13 percent above average and 21 percent above last year and in the Milk River Basin was 40 percent below average and 10 percent above last year.

Mountain and valley precipitation in the St. Mary River Basin during January was 14 percent above average and 82 percent above last year and in the Milk River Basin was 46 percent above average and 375 percent above last year. Water year precipitation for the St. Mary and Milk River Basins, beginning October 1, 1995, was 58 percent above average and 57 percent above last year.

Reservoir storage on the last day of January was 19 percent above average and 52 percent above last year. Lake Sherburne storage was 27 percent above average and 96 percent above last year; Fresno storage was 44 percent above average and 48 percent above last year; Beaver Creek storage was 56 percent above average and 8 percent above last year; and Nelson storage was 24 percent below average and 33 percent above last year.

Streamflows, for the period April through July, in the St. Mary are forecast to be 4 percent above average and 23 percent above last years forecasts and for the period March through July in the Milk are forecast to be 10 percent above average and 60 percent above last years forecasts.

Surface Water Supply Index (SWSI) was 1.6 in the Milk River.

Streamflow Forecasts							
Forecast Pt Forecast Period	<-- Drier -- Future Conditions --- Wetter -->						30 Yr Avg (1000AF)
	90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	30% (1000AF)	10% (1000AF)		
SWIFTCURRENT CREEK at Sherburne (2)							
APR-JUL	94	104	110	103	116	126	107
APR-SEP	110	119	125	100	131	140	125
ST. MARY RIVER near Babb							
APR-JUL	379	412	435	110	458	491	395
APR-SEP	450	486	510	110	534	570	463
ST. MARY RIVER at US/CAN Border (2)							
APR-JUL	430	478	510	110	542	590	462
APR-SEP	509	557	590	109	623	671	539
MILK RIVER at Western Crossing							
MAR-JUL	31	42	49	111	56	67	44
MAR-SEP	35	45	52	113	59	70	46
MILK RIVER at Eastern Crossing (2)							
MAR-JUL	33	59	77	96	95	121	80
MAR-SEP	41	67	85	97	103	129	88

Streamflow Forecasts (continued)

Forecast Pt Forecast Period	<-- Drier -->		Future Conditions		-- Wetter -->		30 Yr Avg (1000AF)
	90% (1000AF)	70% (1000AF)	Chance of Exceeding * 50% (Most Prob) (1000AF)	30% (1000AF)	10% (1000AF)		
BEAVER CREEK near Havre MAR-JUL	0.9	6.3	10.0	97	13.7	19.1	10.3

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

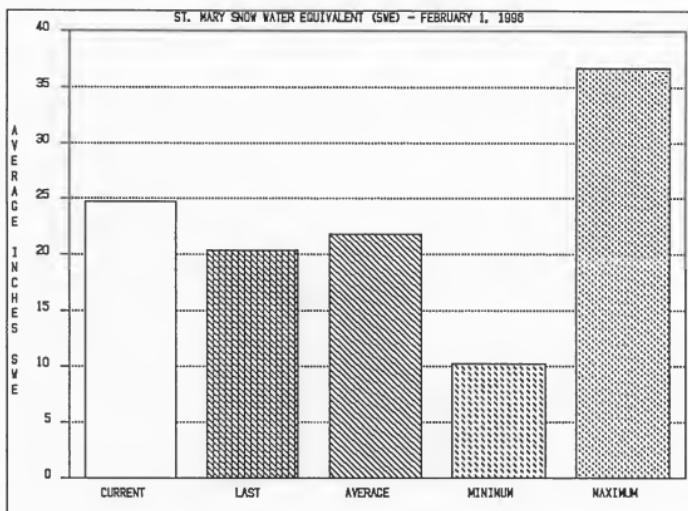
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

Reservoir Storage (1000AF) End of January

Reservoir	Usable Capacity	***** This Year	Usable Storage Last Year	***** Average
LAKE SHERBURNE	64.3	30.4	15.5	24.0
FRESNO	127.0	73.7	49.8	51.2
BEAVER CREEK	3.5	2.8	2.6	1.8
NELSON	66.8	27.5	20.7	36.4

Watershed Snowpack Analysis

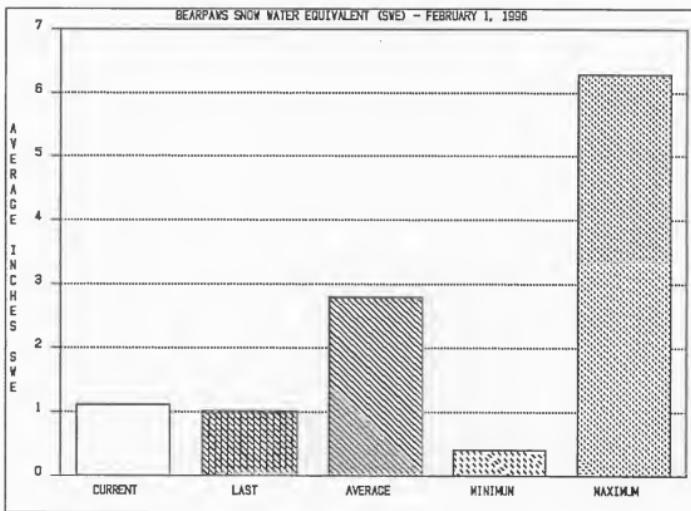
Watershed	Number of Data Sites	This Year as Percent of Last Year	This Year as Percent of Average
ST. MARY RIVER BASIN	2	121	113
BEARPAW MOUNTAINS	5	110	40
CYPRESS HILLS, CANADA	0	0	0
MILK RIVER BASIN	5	110	40
ST. MARY and MILK BASINS	7	120	95



AVERAGE IS FOR THE PERIOD 1961-1990.

MINIMUM SNOW WATER EQUIVALENT, 1961-1995, OCCURRED IN WATER YEAR 1977.

MAXIMUM SNOW WATER EQUIVALENT, 1961-1995, OCCURRED IN WATER YEAR 1972.



AVERAGE IS FOR THE PERIOD 1961-1990.

MINIMUM SNOW WATER EQUIVALENT, 1973-1995, WAS 0.4 INCHES AND OCCURRED IN WATER YEAR 1973.

MAXIMUM SNOW WATER EQUIVALENT, 1973-1995, WAS 6.3 INCHES AND OCCURRED IN WATER YEAR 1978.

UPPER YELLOWSTONE RIVER BASIN as of February 1, 1996

Snowpack conditions in the Upper Yellowstone River Basin were well above average. Snow water content was 35 percent above average and 29 percent above last year.

Mountain precipitation during January was 34 percent above average and 54 percent above last year. Valley precipitation during January was 5 percent below average and 15 percent below last year. Water year precipitation for the basin, beginning October 1, 1995, was 39 percent above average and 20 percent above last year.

Reservoir storage on the last day of January was 5 percent below average and 12 percent below last year. Mystic Lake storage was 40 percent below average and 11 percent below last year and Cooney storage was 16 percent above average and 12 percent below last year.

Streamflows, for the period April through July, are forecast to be 21 percent above average and 18 percent above last years forecasts.

Surface Water Supply Indexes (SWSI's) were 2.9 in the Yellowstone River above Livingston; 0.8 in the Shields River; 2.3 in the Boulder River; 2.2 in the Stillwater River; 2.1 in the Rock/Red Lodge Creeks; 2.6 in the Clarks Fork River; and 2.6 in the Yellowstone River above Bighorn River.

Streamflow Forecasts

Forecast Pt Forecast Period	<--- Drier --- Future Conditions --- Wetter --->						30 Yr Avg (1000AF)	
	Chance of Exceeding *							
	90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	30% (% AVG.) (1000AF)	10% (1000AF)			
YELLOWSTONE RIVER at Corwin Springs								
APR-JUL	1675	1803	1890	117	1977	2105	1609	
APR-SEP	1978	2143	2255	116	2367	2532	1937	
YELLOWSTONE RIVER near Livingston								
APR-JUL	1945	2097	2200	119	2303	2455	1855	
APR-SEP	2322	2503	2625	117	2747	2928	2241	
SHIELDS RIVER near Livingston								
APR-JUL	103	137	160	99	183	217	162	
APR-SEP	116	151	175	98	199	234	179	
BOULDER RIVER at Big Timber								
APR-JUL	283	323	350	104	377	417	335	
APR-SEP	312	353	380	104	407	448	364	
WEST ROSEBUD CREEK near Roscoe (2)								
APR-JUL	65	72	77	126	82	89	61	
APR-SEP	87	95	100	127	105	113	79	
STILLWATER RIVER nr Absarokee (2)								
APR-JUL	479	560	615	123	670	751	498	
APR-SEP	604	685	740	125	795	876	593	

Streamflow Forecasts (continued)

Forecast Pt Forecast Period	<-- Drier -- Future Conditions --- Wetter -->						30 Yr Avg (1000AF)	
	Chance of Exceeding *							
	90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	30% (% AVG.)	10% (1000AF)			
CLARKS FORK RIVER near Belfry								
APR-JUL	567	634	680	128	726	793	532	
APR-SEP	605	685	740	125	795	875	590	
RED LODGE CREEK blw Cooney Res (2)								
APR-JUL	32	50	62	132	74	92	47	
APR-SEP	44	62	74	130	86	104	57	
YELLOWSTONE RIVER at Billings (2)								
APR-JUL	3613	4099	4430	124	4761	5247	3577	
APR-SEP	4548	4879	5235	124	5591	5980	4211	

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

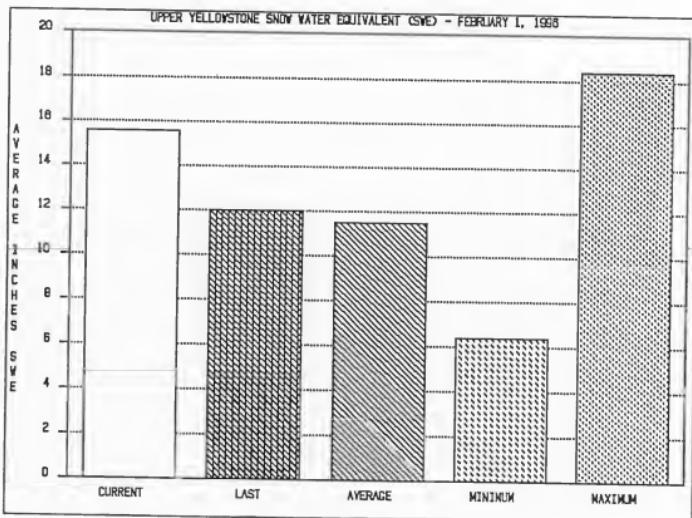
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

Reservoir Storage (1000AF) End of January

Reservoir	Usable Capacity	***** This Year	Usable Storage	***** Last Year	Average
MYSTIC LAKE	21.0	5.1	5.7	8.5	
COONEY	27.4	16.9	19.3	14.6	

Watershed Snowpack Analysis

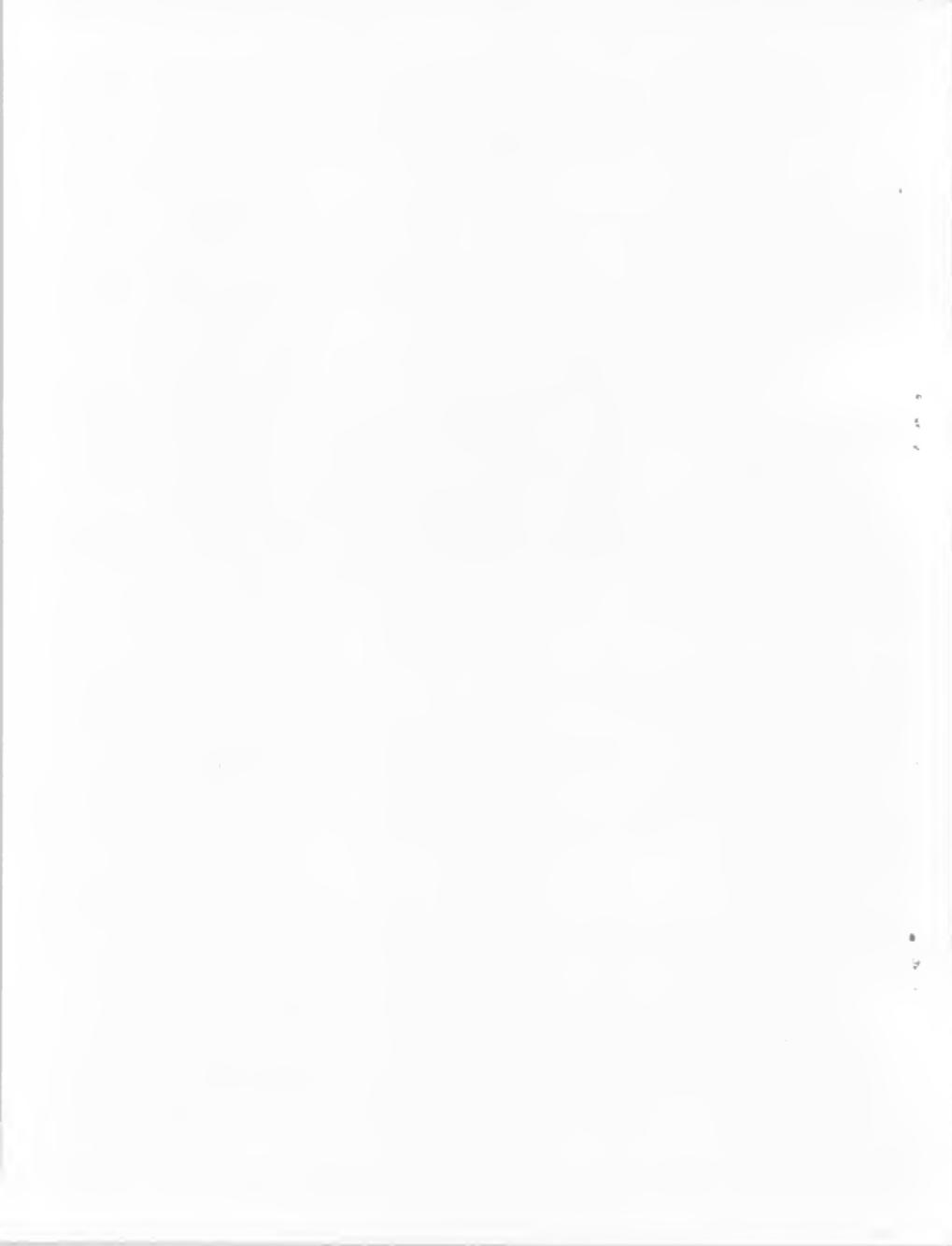
Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
YELLOWSTONE ab LIVINGSTON	14	129	139
SHIELDS	4	104	103
BOULDER-STILLWATER	3	140	128
CLARK'S FORK-ROCK CREEK	9	137	144
UPPER YELLOWSTONE BASIN	26	129	135



AVERAGE IS FOR THE PERIOD 1961-1990.

MINIMUM SNOW WATER EQUIVALENT, 1961-1995, OCCURRED IN WATER YEAR 1977.

MAXIMUM SNOW WATER EQUIVALENT, 1961-1995, OCCURRED IN WATER YEAR 1965.



LOWER YELLOWSTONE RIVER BASIN as of February 1, 1996

Wyoming snowpack conditions for the Lower Yellowstone River Basin were above average. Snow water content was 27 percent above average and 25 percent above last year.

Mountain and valley precipitation during January was 36 percent above average and 43 percent above last year. Water year precipitation for the basin, beginning October 1, 1995, was 28 percent above average and 2 percent below last year.

Reservoir storage on the last day of January was 1 percent above average and 7 percent above last year. Bighorn Lake storage was 6 percent below average and 3 percent below last year and Tongue River storage was 29 percent below average and 1 percent above last year.

Streamflows, for the period April through July, are forecast to be 25 percent above average and 26 percent above last years forecasts.

Surface Water Supply Indexes (SWSI's) were 2.2 in the Bighorn River below Bighorn Lake; 0.0 in the Little Bighorn River; 2.4 in the Yellowstone River below Bighorn River; 0.6 in the Tongue River; and 0.6 in the Powder River.

Streamflow Forecasts

Forecast Pt Forecast Period	<-- Drier -- Future Conditions --- Wetter -->					30 Yr Avg (1000AF)	
	Chance of Exceeding *						
	90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	30% (1000AF)	10% (1000AF)		
YELLOWSTONE RIVER at Billings (2)							
APR-JUL	3613	4099	4430	124	4761	5247	3577
APR-SEP	4548	4879	5235	124	5591	5980	4211
BIGHORN RIVER nr St. Xavier (2)							
APR-JUL	1431	1803	2055	125	2307	2679	1645
APR-SEP	1686	2004	2270	127	2536	2799	1794
LITTLE BIGHORN RIVER nr Hardin							
APR-JUL	71	113	142	101	171	213	140
APR-SEP	81	128	160	102	192	239	157
TONGUE RIVER stateline nr Decker (2)							
APR-JUL	113	204	240	104	276	327	230
APR-SEP	125	223	260	102	297	364	256
YELLOWSTONE RIVER at Miles City (2)							
APR-JUL	5540	6169	6840	126	7511	8092	5431
APR-SEP	6407	7125	7890	126	8655	9359	6281
POWDER RIVER at Moorhead							
MAR-JUL	86	216	245	100	274	371	246
MAR-SEP	94	236	265	99	294	405	268
POWDER RIVER near Locate							
MAR-JUL	154	211	250	78	289	346	320
MAR-SEP	156	227	275	80	323	394	343

Streamflow Forecasts (continued)

Forecast Pt Forecast Period	<--- Drier --- Future Conditions --- Wetter -->		Chance of Exceeding *	30 Yr Avg (1000AF)
	90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	30% (% AVG.)

YELLOWSTONE RIVER nr Sidney (2)

APR-JUL	6103	6970	7700	130	8430	9362	5925
APR-SEP	7018	7752	8600	126	9448	10766	6814

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

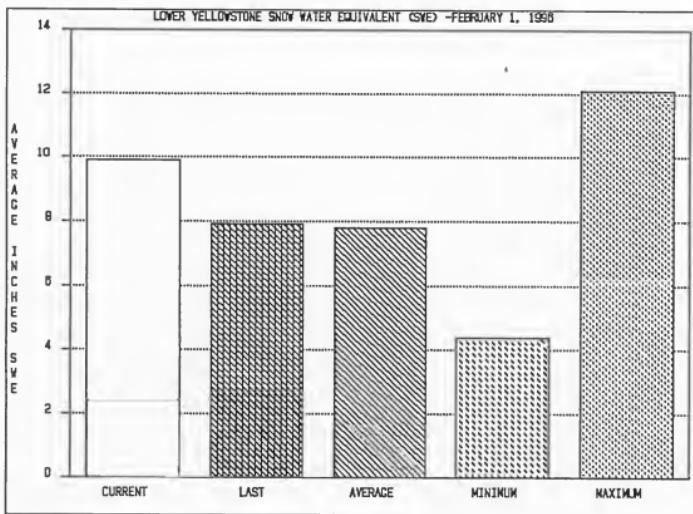
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

Reservoir Storage (1000AF) End of January

Reservoir	Usable Capacity	***** This Year	Usable Storage Last Year	***** Average
BIGHORN LAKE	1356.0	848.9	792.8	839.2
TONGUE RIVER	68.0	22.4	19.3	27.1

Watershed Snowpack Analysis

Watershed	Number of Data Sites	This Year as Percent of Last Year	This Year as Percent of Average
WIND RIVER (Wyoming)	19	140	134
SHOSHONE RIVER (Wyoming)	7	139	160
BIGHORN RIVER (Wyoming)	21	125	129
LITTLE BIGHORN (WYOMING)	3	124	103
TONGUE RIVER (Wyoming)	9	115	113
POWDER RIVER (Wyoming)	8	88	103
LOWER YELLOWSTONE BASIN	47	125	127



AVERAGE IS FOR THE PERIOD 1961-1990.

MINIMUM SNOW WATER EQUIVALENT, 1961-1995, OCCURRED IN WATER YEAR 1977.

MAXIMUM SNOW WATER EQUIVALENT, 1961-1995, OCCURRED IN WATER YEAR 1983.



Federal Building, Room 443
10 E. Babcock
Bozeman, MT 59715

**Montana
Basin Outlook Report**
Natural Resources Conservation Service
Bozeman, MT

